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# The Goodyear Tire & Rubber Company

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23 July 2015

United States Environmental Protection Agency, Region 9  
75 Hawthorne Street (SFD-8-2)  
San Francisco, California 94105

Attention: Ms. Catherine Brown  
Remedial Project Manager

Arizona Department of Environmental Quality  
1110 West Washington Street  
Phoenix, Arizona 85007

Attention: Mr. Brian Stonebrink  
Environmental Project Manager

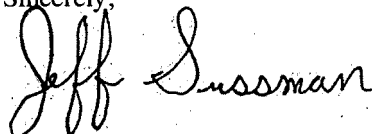
Subject Extraction Well E-103 and Pipeline Completion Report  
Phoenix-Goodyear Airport South Superfund Site  
Goodyear, Arizona

Dear Ms. Brown and Mr. Stonebrink:

The Goodyear Tire and Rubber Company (GTRC) is providing the enclosed Extraction Well E-103 and Pipeline Completion Report for the Phoenix-Goodyear Airport South Site, Goodyear, Arizona. This completion report documents the installation of extraction well E-103 and associated conveyance pipeline in September 2014.

Please feel free to call me at (330) 796-0578 if you have any questions regarding this report.

Sincerely,



Jeff Sussman  
Global Remediation Manager



23 July 2015

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Enclosures:

Agency Evaluation of the GTRC Responses to Review Comments on the Draft Extraction Well E-103 and Pipeline Completion Report Letter dated 25 June 2015  
GTRC Response to Comments Table dated 21 July 2015  
Extraction Well E-103 and Pipeline Completion Report dated 23 July 2015

c: Brown & Caldwell, Inc.; Attn: Larry Matthews (electronic)  
Brown & Caldwell, Inc.; Attn: Lauren Handley, (electronic)  
City of Goodyear; Attn: Mark Holmes, (electronic)  
City of Goodyear; Attn: Gretchen Erwin, (electronic)  
City of Phoenix; Attn: Julie Riemenschneider, (electronic)  
City of Phoenix; Attn: Joseph Husband, (electronic)  
City of Phoenix; Attn: David Gordon, (electronic)  
Conger Environmental; Attn: Jennie Conger, (electronic)  
Gilbane, Inc.; Attn: Larry Phillips, (electronic)  
Gilbane, Inc.; Attn: Kent Baugh, (electronic)  
Haley & Aldrich, Inc.; Attn: Paula Panzino (electronic)  
Hargis + Associates, Inc.; Attn: Michael Long, (electronic)  
Hargis + Associates, Inc.; Attn: Chris Legg, (electronic)  
Los Alamos Technical Associates, Inc.; Attn: Todd Struttman, (electronic)  
The Goodyear Tire & Rubber Company; Attn: Jeff Sussman, (electronic)  
The Goodyear Tire & Rubber Company; Attn: Ron Clark, (electronic)



**To:** Catherine Brown, Remedial Project Manager, EPA Region 9  
**From:** Larry Phillips, R.G., Senior Project Manager, Gilbane Federal/Phoenix  
**Date:** June 25, 2015  
**Subject:** Agency Evaluation of the GTRC Responses to Review Comments on the Draft Extraction Well E-103 and Pipeline Completion Report, Phoenix-Goodyear Airport-South Superfund Site, Goodyear, Arizona

**Contract /TO:** EP-S9-08-03 / TO # 0006      **Gilbane DCN:** 07163.0007.0299

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Gilbane Federal (Gilbane), on behalf of the U.S. Environmental Protection Agency (EPA), reviewed the document containing the responses to comments on the draft report titled *Extraction Well E-103 and Pipeline Completion Report, Phoenix-Goodyear Airport-South Superfund Site, 1658 South Litchfield Road, Goodyear, Arizona*. Haley & Aldrich, Inc. submitted the document with the responses on May 27, 2015, on behalf of the Goodyear Tire & Rubber Company (GTRC).

Gilbane found the responses provided to our comments to be satisfactory, with the following exceptions.

- Response to General Comment No. 1 and No. 2 - Section VI.F of the 1991 Consent Decree states that all activities undertaken by Defendants pursuant to this Consent Decree shall be performed in accordance with the requirements of applicable State laws and regulations. In accordance with Arizona Revised Statutes (ARS), Title 32, Sections 32-101(B)(12), 32-101(B)(15) and 32-125, and Arizona Administrative Code (AAC) R-4-30-304, final documents must have the seal and signature of an Arizona Registrant; either an Arizona Registered Geologist or Professional Engineer. ARS, Title 32, Section 32-125 specifies that: (A) each seal shall bear the name of the registrant and shall state the profession in which the registrant is permitted to practice; (B) plans, specification, plats or reports prepared by the registrant or registrant's bona fide employee shall be issued under the registrant's seal; and (C) the registrant is responsible for all documents that the registrant signs, stamps or seals, including those documents prepared by the registrant's bona fide employee.
- Minor Comment No. 10 – The work plan to construct extraction well E-103 (dated 31 January 2014) identifies on page 3 that development will continue until the produced water is visibly clear and essentially sediment free. Gilbane recommends that Section 4 of the final report include a statement regarding the clarity of the extracted groundwater upon the completion of well development.
- Minor Comment No. 14 – Gilbane recommends that the maximum extraction capacity of well E-103 as discussed in the final report, should be based on field tests and known conditions, not a theoretical estimate.



By way of an e-mail sent to EPA and Gilbane on June 10, 2015, the Arizona Department of Environmental Quality found the responses to be acceptable and had no further comments. Approval of the responsiveness summary by EPA is recommended, as qualified. A final report should be submitted for confirmation that all responses and recommendations have been incorporated.

Please contact Larry Phillips (602-792-6811; [lphillips@gilbaneco.com](mailto:lphillips@gilbaneco.com)) with any questions about this technical memorandum.

cc: Gilbane Project File (electronic copy)

Revised Agency Team Comment Table

Document titled, *Extraction Well E-103 and Pipeline Completion Report, Phoenix-Goodyear Airport-South, 1658 South Litchfield Road, Goodyear, Arizona*. Prepared by Haley & Aldrich, Inc., dated January 30, 2015, and submitted by Jeff Sussman of the Goodyear Tire & Rubber Company in a letter dated 30 January 2015.

Phoenix-Goodyear Airport South Superfund Site

Comment Number	Reviewer(s)	Section(s)	Page(s)	Figure(s)	Table(s)	Comment	Response to Comment
<b>General (Gen-) Comments</b>							
Gen-1	ADEQ	---	---	---	---	Final reports should be sealed by a professional engineer and/or geologist who is registered in the state of Arizona. The Engineering drawings were sealed but not the overall report.	We reviewed the Consent Decree and could not locate a requirement to stamp or seal documents. Could ADEQ provide a reference for this requirement for NPL projects that are led by the USEPA?
Gen-2	Gilbane	---	---	---	---	Gilbane concurs with ADEQ's General Comment 1 with the following qualifier: In consideration of the scope of the work described in the report (i.e., well installation, aquifer testing, and conveyance pipeline construction), Gilbane recommends that the final report be signed/sealed by a geologist and an engineer registered in the state of Arizona. <b>Gilbane's 25 June 2015 Comment to GTRC's Response -</b> Section VI.F of the 1991 Consent Decree states that all activities undertaken by Defendants pursuant to this Consent Decree shall be performed in accordance with the requirements of applicable State laws and regulations. In accordance with Arizona Revised Statutes (ARS), Title 32, Sections 32-101(B)(12), 32-101(B)(15) and 32-125, and Arizona Administrative Code (AAC) R-4-30-304, final documents must have the seal and signature of an Arizona Registrant; either an Arizona Registered Geologist or Professional Engineer. ARS, Title 32, Section 32-125 specifies that: (A) each seal shall bear the name of the registrant and shall state the profession in which the registrant is permitted to practice; (B) plans, specification, plats or reports prepared by the registrant or registrant's bona fide employee shall be issued under the registrant's seal; and (C) the registrant is responsible for all documents that the registrant signs, stamps or seals, including those documents prepared by the registrant's bona fide employee.	We reviewed the Consent Decree and could not locate a requirement to stamp or seal documents. Could Gilbane provide a reference for this requirement for NPL projects that are led by USEPA?  The final report has been stamped by the Arizona registrants.
Gen-3	Gilbane	---	---	---	---	The report should include sufficient summary information of well installation, aquifer testing, and pipeline construction so that the reviewer does not have to go to the appendices and find the details. Minor comments are provided below pertaining to this general comment.	All of the Consent Decree-required document elements have been provided. It is redundant and costly to repeat details within the text of the report when the information has already been provided in the appendices. GTRC has discussed with, and USEPA has been amenable to, streamlining deliverables such as this. GTRC respectfully disagrees with the request to duplicate material in the report body.
Gen-4	Gilbane	---	---	---	---	The report does not include initial TCE concentration data for extraction well E-103 after being brought online, which was identified as November 6, 2014 in the November Monthly report. Include the TCE concentration data in the report, or reference the document where this information has been reported. In addition, the report should state the planned frequency of water level measurement and groundwater sampling at E-103.	GTRC has verified that water quality and monitoring information relating to E-103 was provided in the 2014 Second Semi-annual Report.



Revised Agency Team Comment Table

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Phoenix-Goodyear Airport South Superfund Site

Comment Number	Reviewer(s)	Section(s)	Page(s)	Figure(s)	Table(s)	Comment	Response to Comment
<b>Major (Maj-) Comments</b>							---
Maj-1	---	---	---	---	---	---	---
<b>Minor (Min-) Comments</b>							
Min-1	Gilbane	2	2	---	---	First sentence: Recommend that text be added referring to Appendix B for the access easement agreement.	The text has been modified to reflect that the access agreement has been attached to the well permit in Appendix B.
Min-2	Gilbane	2	2	---	---	Second paragraph, last sentence: As the location of well E-103 and the route of the pipeline from this well to the existing pipeline at well E-102 are on private property, was any utility clearance performed by a private utility locator?	No private utility location was performed. Haley & Aldrich notified Arizona Bluestake at least 48 hours prior to drilling to identify publicly-owned subsurface utilities near the proposed boring location. GTRC fails to see the relevance of knowing if a private utility locator was used.
Min-3	ADEQ & Gilbane	2	2	---	---	Page 2, Third paragraph. The results of the hydrostatic testing per the as-built (Sheet G-2, Note Q) should be included in the text.	The text has been modified to include a reference to the testing results in Appendix E.
Min-4	ADEQ & Gilbane	2	2	---	---	Page 2, Fifth paragraph. A statement should be included indicating the pipeline was installed per plan specifications. If the pipeline was not installed per plan, the variances should be listed and the rationale indicated. Any revisions to the original design should be noted and the rationale indicated.	All of the system drawings are now completed as "as-builts". As such, any required field modifications are illustrated on these drawings. In the future, GTRC plans to indicate any required field changes on the drawings only. For this report, the text has been modified to state installation was in accordance with the design with the exception of the installation of a shed to enclose the electrical panel.
Min-5	Gilbane	3	3	---	---	Second paragraph, first sentence and Appendix C: The geologic log for E-103 does not follow the industry standard of using the Unified Soil Classification System (USCS). The soil type identified and soil group symbol are not provided. The log should be reviewed and revised in the final report to follow the USCS format.	Logging of the geologic materials in E-103 used the same soil classification system used for the other GTRC extraction wells in the area for direct lithologic and water production performance comparison. For this report, the geologic logs were revised to include soil types and soil group symbols consistent with the USCS classifications. Revised geologic logs have been added to the report. USCS classification will be added to subsequent drilling logs as well.
Min-6	ADEQ	3	3	---	---	Page 3, Bullet 3. According to Appendix C, the filter pack was installed from 1 foot below the bottom of the screen, not the bottom of the casing.	The text has been modified to reflect that the filter pack was placed 1 foot from the bottom to 5 feet above the top of the screen.
Min-7	ADEQ	3	3	---	---	Page 3, Bullet 4. Please indicate the time allowed for hydration before setting the cement-bentonite grout seal.	Approximately 1 hour lapsed between the setting of the bentonite seal and placement of the bentonite grout.
Min-8	ADEQ	3	3	---	---	Page 3, Bullet 5. Please indicate the emplaced lift size and set time and whether the grout material was bentonite grout or a cement-bentonite grout mixture.	Bentonite grout was used and left to set overnight.
Min-9	Gilbane	3	3	---	---	Were centralizers used in the installation of the well casing?	Yes, centralizers were used for installation of the well casing.



Revised Agency Team Comment Table

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Phoenix-Goodyear Airport South Superfund Site

Comment Number	Reviewer(s)	Section(s)	Page(s)	Figure(s)	Table(s)	Comment	Response to Comment
Min-10	ADEQ & Gilbane	4	4	---	---	<p>Page 4, First paragraph. Please indicate development parameters/indicators. Second paragraph. Please indicate how additional development was accomplished.</p> <p><b>Gilbane's 25 June 2015 Comment to GTRC's Response</b> - The work plan to construct extraction well E-103 (dated 31 January 2014) identifies on page 3 that development will continue until the produced water is visibly clear and essentially sediment free. Gilbane recommends that Section 4 of the final report include a statement regarding the clarity of the extracted groundwater upon the completion of well development.</p>	<p>Development parameter indicators were not collected. The second paragraph of Section 4 states additional development was performed using a temporary pump.</p> <p>Text has been modified to reflect that pumping of the groundwater continued until the filters did not contain visible captured sediments.</p>
Min-11	Gilbane	5	5	---	---	<p>While the extraction pump is described, information is not provided on other major components at the E-103 wellhead. Examples of these components not described in this section are the pump discharge pipe, aboveground valving components of the discharge pipe, electrical service details (voltage, phase, and ampere), and communication system and associated process control for pump control. The description of these major components should reference the specific sheet(s) of the as-built drawings for the as-built details. The location of the isolation valve for E-103 being just before the connection to the existing pipeline at well E-102, and not at the E-103 wellhead, should also be mentioned.</p>	<p>The complete as-built design is included in Appendix A.</p>
Min-12	ADEQ	6	6	---	---	<p>Page 6, Sections 6.1 and 6.2. Please provide the calculations used to derive values such as hydraulic capacity, and pumping capacity which are discussed in these sections. This information could be provided as an appendix.</p>	<p>The transmissivity was estimated based on the specific capacity measured at the end of the step-test (maximum pumping rate) using the following derivation of the nonequilibrium well equation (Cooper and Jacob, 1946): <math>Q/s = T / (264 \log(0.3Tt/r^2S))</math> where Q=flow rate, gpm; s=drawdown/ft; T=transmissivity, gpd/ft; t=time, days; r=well radius, ft; and S=storage coefficient (unitless). The value is regarded as a rough estimate given the short duration of the step-test.</p>
Min-13	Gilbane	6.1	6	---	---	<p>Documentation of field data from the step test needs to be included with the report. At a minimum, flow rate, drawdown observed at E-103 and the observation wells, and other field observations/data need to be included in this documentation to enable the independent verification of the hydrogeological interpretations and parameter estimates from the step test.</p>	<p>A table documenting flow rate in E-103 and drawdown observed in the E-103 and the observation wells (and their respective distances to E-103) has been prepared and will be included with the revised report.</p>



Revised Agency Team Comment Table

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Min-14	Gilbane	6.2	6	---	---	What information and evaluation methods were used to establish the finding in this section that E-103 was capable of pumping approximately 2,200 gpm? A constant rate pump test was not performed based on the results from the step test, and the maximum extraction rate during the step test was 462 gpm.	The pumping capacity estimate is a rough, theoretical estimate based on the specific capacity observed during the step-test, available drawdown (the depth to the top of the well screen minus the static water level being the maximum available drawdown), and a factor of safety. The well diameter, however, is not large enough to accommodate a pumping rate of this magnitude. The purpose in providing the estimate is solely to illustrate that the well's theoretical pumping capacity far exceeds the estimated design flow required to effect hydraulic capture (approximately 250 gpm).
						<b>Gilbane's 25 June 2015 Comment to GTRC's Response -</b> Gilbane recommends that the maximum extraction capacity of well E-103 as discussed in the final report, should be based on field tests and known conditions, not a theoretical estimate.	Text of Section 6.2 has been updated to state that the maximum capacity of the well exceeds the target rate and capacity of the pump. The well has actively operated at flows approaching 400 gpm, which far exceeds the 250-gpm design flow.
Min-15	ADEQ	---	---	1	---	Figure 1 is not mentioned in text.	Text of Section 1 and Section 6 has been modified to include a reference to Figure 1.
	Gilbane	6	6	1		First paragraph, third sentence: Gilbane recommends the text include a reference to Figure 1 at the end of the listing of observation wells.	
Min-16	ADEQ	---	ii	2 & 3	---	Figures 2 & 3 titles in the Table of Contents should be corrected to match the figures.	The titles of Figure 2 and 3 have been updated in the text.
Min-17	ADEQ	---	1, 5, & 8	---	---	There are two references for Haley & Aldrich, 2014. These should be identified with an 'a' and 'b' (i.e., 2014a and 2014b) and ordered as they appear in the text. Also, the Bierschenk reference in the text on Page 6 should include the author name (i.e., Bierschenk, 1964).	The Haley & Aldrich references will be distinguished with an "a" and "b" as requested, and the text on p. 6 has been revised to include the Bierschenk reference and date.
Min-18	Gilbane	---	---	2	---	Recommend that notes be added to figure that address the following: 1) extraction rate at E-103 associated with the shown drawdown and 2) the depth to the water table prior to the beginning of pumping for the step test.	The figure will be annotated accordingly with the E-103 extraction rate and the static water level measured prior to the start of the pumping test.
Min-19	Gilbane	5 & App C	5	---	---	The horizontal and vertical coordinates for well E-103 need to be included in the report (Section 5 and/or Appendix C). Horizontal coordinates should be based on a NAV83 datum and the vertical elevation to 0.01 foot based on NAVD88. The reference point at well E-103 for the surveyed coordinates also should be stated in the final report.	The text has been modified to include Section 8. Well Surveying.



*Revised Agency Team Comment Table*

*Document titled, **Extraction Well E-103 and Pipeline Completion Report, Phoenix-Goodyear Airport-South, 1658 South Litchfield Road, Goodyear, Arizona** . Prepared by Haley & Aldrich, Inc., dated January 30, 2015, and submitted by Jeff Sussman of the Goodyear Tire & Rubber Company in a letter dated 30 January 2015.*

*Phoenix-Goodyear Airport South Superfund Site*

Comment Number	Reviewer(s)	Section(s)	Page(s)	Figure(s)	Table(s)	Comment	Response to Comment
<b>Editorial (E-) Comments</b>							
E-1	Gilbane	1	1	---	---	Last sentence: Sentence does not make sense as written. Should a period be inserted after "... (October 2014)" and then the subsequent text "installing E-103 as described below." be deleted?	The text has been modified.
E-2	Gilbane	5	5	---	---	First sentence: Identify the units for the flow rate range, assumedly gallons per minute (gpm).	The text has been modified to include the units of flow rate.
E-3	Gilbane	5	5	---	---	Last sentence: Wording needs to be revised to identify the pump installation depth with respect to feet below ground surface (bgs) and that the variable frequency drive functions to throttle the flow rate. Recommend wording: "Yellow Jacket removed....and installed at 185 feet below ground surface a 40-horsepower....with a variable frequency drive to throttle the flow..."	The text has been modified.



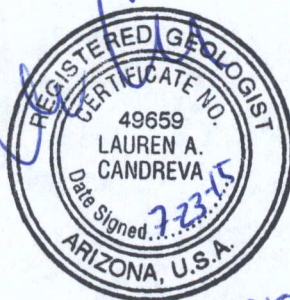


Expires: 3/31/2018

**EXTRACTION WELL E-103 AND PIPELINE  
COMPLETION REPORT  
PHOENIX-GOODYEAR AIRPORT-SOUTH  
SUPERFUND SITE  
1658 SOUTH LITCHFIELD ROAD  
GOODYEAR, ARIZONA**

By Haley & Aldrich, Inc.  
Phoenix, Arizona

For The Goodyear Tire & Rubber Company  
Akron, Ohio



exp. 6-30-2018

File No. 39049-120  
July 2015

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## Appendix A – As-Built Drawings

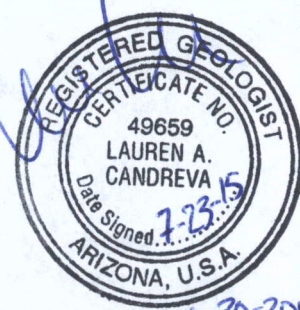
## Appendix B – Well Permit

## Appendix C – Well Log

## Appendix D – Generated Waste Documentation

## Appendix E – Results of Hydrostatic Testing for E-103 Pipeline

## Appendix F – Wellhead Survey



## List of Tables

Table No.	Title
I	Well E-103 Step-Test Data
II	Activity Generating the Water and Final Discharge/Disposal Location

## List of Figures

Figure No.	Title
1	Extraction Well E-103 and Pipeline Location Map
2	Drawdown vs Distance, End of E-103 Step Test
3	Step-Drawdown Test Data - S/Q vs Q, E-103

## 1. Introduction

This report documents the installation of extraction well E-103 and construction activities to connect the new well to the existing pipeline at extraction well E-102 (Figure 1). Extraction well E-103 was installed to comply with the hydraulic containment requirement under Section VII.C.1.a of the 1991 Consent Decree. E-103 was located in accordance with the results of a hydrogeologic evaluation completed using the Phoenix-Goodyear Airport South (PGA-S) groundwater model approved by the U.S. Environmental Protection Agency (USEPA) and Arizona Department of Environmental Quality (ADEQ) for this use on 7 November 2013. The design and installation of well E-103 was detailed in "Work Plan to Construct Extraction Well E-103" (Haley & Aldrich, 2014a) which was approved by USEPA and ADEQ on 28 February 2014. Operation of well E-103 will optimize capture of the northern Subunit C groundwater plume at PGA-S. Pipeline construction was completed in two phases: Phase 1 was completed in March 2014, followed by Phase 2 in October 2014 after installation of extraction well E-103.



## 2. Pipeline Installation

Phase 1 of the pipeline construction was completed prior to installing E-103 and included obtaining easement access for the well and pipeline; the installation of the water conveyance pipeline, communications, and electrical conduits; and compaction testing of the main pipeline's backfill and hydrostatic testing of the water lines. As-built drawings for the E-103 pipeline are included in Appendix A. A copy of the access agreement has been included in the well permit application in Appendix B. The second phase of work included:

- Installing electrical and communications conductors;
- Completing the aboveground infrastructure;
- Connecting the pipeline to the existing pipeline of E-102;
- Removing E-102 from service by pulling the pump and securing the wellhead and compound;
- Setting up power and communications at both E-102 and E-103 locations to support E-103 operation and controls; and
- Installing fencing to secure E-103.

Haley & Aldrich, Inc. (Haley & Aldrich) submitted the pipeline design to City of Goodyear Engineering on 13 February 2014 for review and approval prior to its installation. The City of Goodyear permit was issued on 20 March 2014. While waiting for the permit, B&F Contracting, Inc. (B&F) built a well pad to drill well E-103 and construct the E-103 compound. A land survey was also conducted to locate the pipeline easement boundaries and E-103 well site. B&F also notified Arizona Bluestake to coordinate the location of the public underground utilities within the pipeline easement.

Phase 1 began on 13 March 2014. The pipeline and aboveground conduits were constructed, installed in the trench, then backfilled and compacted. A temporary cap was then placed on each end of the pipeline and conduits on 28 March 2014 to complete Phase 1 of construction. The end of the pipeline at E-103 was buried and its location marked to avoid potential damage from vehicle traffic and farming operations while drilling and installing E-103. The results of the hydrostatic testing can be found in Appendix E.

Phase 2 construction was initiated while drilling E-103 and was completed on 14 October 2014. The only major change to the original design was the installation of a fiberglass reinforced plastic shed to enclose the electrical panel.

### 3. Extraction Well E-103 Installation

A Notice of Intent to install well E-103 was submitted to the Arizona Department of Water Resources on 5 March 2014 (Appendix B).

Haley & Aldrich also notified Arizona Bluestake at least 48 hours prior to drilling to identify publicly-owned subsurface utilities near the proposed boring location. B&F then constructed a well pad and set and secured a 30-inch diameter conductor casing 20 feet below ground surface.

Yellow Jacket Drilling Services (Yellow Jacket) mobilized to the site on 14 April 2014; drilling and sampling oversight were provided by Haley & Aldrich and a geologist from Los Alamos Technical Associates. Well E-103 was drilled using the dual-rotary drilling method to advance a cased borehole to the top of the Middle Fine Unit. Grab samples were collected at 5-foot intervals from the cyclone separator and the lithology recorded. E-103 was constructed as described below:

1. The borehole terminated at a depth of 325 feet (top of the Middle Fine Unit);
2. A 12-inch diameter, low carbon steel casing was installed with a 10-foot stainless steel sump and 90 feet of 50-slot stainless-steel louvered screen;
3. A filter pack was placed 1 foot from the bottom to 5 feet above the top of the screen, followed by 5 feet of choke sand above the filter pack, near the Subunit B/Subunit C contact;
4. A 40-foot thick, high-solids, bentonite seal was placed above the choke sand, adequately extended and set into Subunit B, and allowed to be hydrated for 24 hours;
5. A bentonite grout was placed from the top of the seal to approximately 20 feet below grade around the casing; and
6. A cement grout was applied to the upper 20 feet of the casing.

E-103 installation was completed on 25 April 2014. A well log and construction diagram are included in Appendix C.

#### 4. Well Development

The construction of the 143rd Avenue alignment located immediately adjacent to the E-103 well pad and pipeline commenced during the installation of E-103. The 143rd Avenue alignment is offset from the E-103 pipeline by 10 feet. It was thought these construction activities might prevent site access once the drill rig was removed; E-103 was therefore developed with the same drill rig once the construction of E-103 was complete. The drill rig was positioned over the well and used to swab and air-lift groundwater and sediment from the well bore into a 21,000-gallon baker tank. The water was allowed to decant and was then taken to the Subunit A treatment compound to be treated by the air stripper.

Additional E-103 development was completed in October 2014, just prior to connecting the aboveground pipeline and controls. A temporary pump, powered by a portable generator, was installed in the well at a depth of 180 feet and pumped at a sustained rate of approximately 250 gallons per minute (gpm) for two hours. The pumped groundwater was passed through sand filters and discharged into the completed pipeline for treatment by the Subunit C treatment system and discharge into the new Bullard Wash pipeline. Pumping of groundwater continued until the filters did not contain visible captured sediments.

## 5. Pump Installation

As discussed in the "Groundwater Model Update Report" (Haley & Aldrich, 2014b), the required flow rate needed for Subunit C plume capture is in the range of 220 to 350 gpm. The anticipated yield of well E-103 was 400 gpm; therefore, the well was designed to accommodate a pump capable of 400 gpm to provide additional flexibility to the operational flowrate. In October 2014, following completion of well development activities, the permanent extraction pump was installed in E-103. Yellow Jacket removed the temporary pump and installed a 40-horsepower Grundfos submersible pump (model number 475S-400-4) at a depth of 185 feet. The pump is equipped with a variable frequency drive to throttle the flow rate to between 100 and 450 gpm.



## 6. Well Testing

### 6.1 STEP-TEST PROCEDURES

Haley & Aldrich performed a step-test on well E-103 on 10 December 2014. The step-test was comprised of four, 1-hour long steps at progressively increased pumping rates of approximately 109, 226, 344, and 462 gpm. Observation wells GMW-15UC, GMW-16UC, GMW-17UC, GMW-18UC, GMW-19LC, GMW-20LC, GMW-25LC, and GMW-26LC (Figure 1) were monitored using a water level meter during each step.

Well E-103 was shut down and allowed to recover approximately one hour between steps, allowing the water level to approach static conditions (i.e., approximately 90 percent or more recovery from the residual drawdown). The specific capacity (flow rate per feet of drawdown) decreased from over 50 gpm per foot in the first step, to 25 to 26 gpm per foot in subsequent steps. This trend is typical of step-tests, as the short duration of the steps usually means the first step or steps did not reach equilibrium, which results in a high bias in specific capacity in the earliest step(s).

Observation wells GMW-15UC, GMW-16UC, GMW-17UC, GMW-18UC, GMW-19LC, GMW-20LC, GMW-25LC, and GMW-26LC were monitored during each step. Figure 2 illustrates drawdown versus distance (to pumping E-103; wherein drawdown in E-103 is plotted against an effective borehole radius of 0.5 foot).

Based on the trend line fitted to the observation well data, the drawdown in a theoretical 100 percent efficient well is in the range of 10 to 12 feet, which implies that E-103, with approximately 18 feet of drawdown at the conclusion of this final step, is approximately 50 to 65 percent efficient. Through distance-drawdown analysis of the above plot, which considers the slope of the trend line, the flow rate at the final step (460 gpm), and the approximate saturated thickness in the vicinity of Subunit C (approximately 130 feet), the estimated hydraulic conductivity of Subunit C is in the range of 80 to 90 feet per day.

Table I. Well E-103 Step-Test Data

Observation Well	Distance to E-103 (feet)	Step	Static	1		2		3		4	
		Flow Rate (gpm)	---	109		226		344		462	
		Pumping Well E-103	95.4	97.6	2.1	104.2	8.8	109.5	14.1	114.0	18.6
GMW-15UC	1577	Depth to Water/ Drawdown (feet)	81.7	81.9	0.1	81.9	0.2	82.1	0.4	82.2	0.4
GMW-16UC	970		85.8	85.9	0.1	86.2	0.4	86.4	0.7	86.5	0.8
GMW-17UC	1450		87.3	87.4	0.1	87.5	0.2	87.6	0.4	87.6	0.4
GMW-18UC	1573		89.1	89.1	0.0	89.2	0.1	89.3	0.2	89.3	0.2
GMW-19LC	610		87.7	87.9	0.2	88.4	0.7	88.8	1.1	89.0	1.3
GMW-20LC	921		92.6	NM		NM		NM		93.7	1.0
GMW-25LC	265		94.6	95.0	0.3	95.9	1.3	96.6	2.0	97.2	2.5
GMW-26LC	405		90.0	90.3	0.3	91.0	1.0	91.6	1.6	92.0	2.0
E-103 Specific Capacity (gpm/foot)			--	50.7		25.7		24.4		24.9	
gpm = gallons per minute NM = not measured											

## 6.2 PROJECTED CAPACITY OF EXTRACTION WELL E-103

Based on the available drawdown in E-103 (over 110 feet), the step-test pumping rates - the highest of which exceeded 460 gpm - and the specific capacity observed at the end of the step test, the well has ample capacity to meet the target flow rate of roughly 350 gpm (previously estimated based on groundwater modeling of plume capture) under long-term operating conditions. Using a graphical method by Bierschenk (Bierschenk, 1964), where inverse values of specific capacity are plotted versus flow rate and a trend line fitted to the data (Figure 3), the estimated maximum capacity of well E-103 for the existing available drawdown exceeds the target rate and the capacity of the pump.

Based on the well-screen open area, well E-103 is capable of pumping approximately 2,200 gpm without exceeding the typical maximum recommended entrance velocity of 0.1 foot per second. E-103 can therefore be pumped at its maximum theoretical projected capacity (approximately 1,200 to 1,500 gpm) without exceeding the entrance-velocity design criterion of 0.1 foot per second.

## 7. Investigation Derived Waste Management

### 7.1 SOIL

The soil cuttings generated during drilling were collected in plastic-lined, roll-off boxes and transported to the Waste Management Butterfield Disposal (WMBD) facility under the existing solid waste profile for PGA South soil cuttings. Prior to transport, accumulated water in the roll-offs was decanted and pumped into a 21,000-gallon, on-site baker tank for transport to the Subunit A air stripper for treatment and disposal, and/or disposal at an off-site facility. Wet soil in the roll-off boxes was allowed to air-dry prior to transport to the landfill.

A total of 68.04 tons of drill cuttings was disposed. Appendix D contains disposal documentation for the drill cuttings that were transported to WMBD.

### 7.2 WATER

Liquid waste consisted of water generated during drilling, development, and testing. Water generated during drilling and Phase 1 development was either transported to the Subunit A treatment compound and discharged to the air stripper or to the WMBD facility under the existing liquid waste profile. Water generated during Phase 2 development and testing was discharged directly to the pipeline, conveyed to the Subunit C groundwater treatment system, treated, and discharged to the Bullard Wash pipeline. Well E-103 drilling, development, and testing activities generated 552.5 tons (133,000 gallons) of water. Table II below provides the quantities of generated water, the activity generating the water, and the final discharge/disposal location of the water.

Table II. Activity Generating the Water and Final Discharge/Disposal Location

Activity	Discharge/Disposal Location	Quantity (Tons)
Drilling and Phase 1 Development	Subunit A Treatment Compound	49.9
Phase 2 Development	Subunit C Treatment Compound	124.7
Drilling and Phase 1 Development	WM's Butterfield Landfill	93.3
Testing	Subunit C Treatment Compound	284.6
TOTAL		552.5

Appendix D contains disposal documentation for the water transported to the WMBD facility.

## 8. Well Surveying

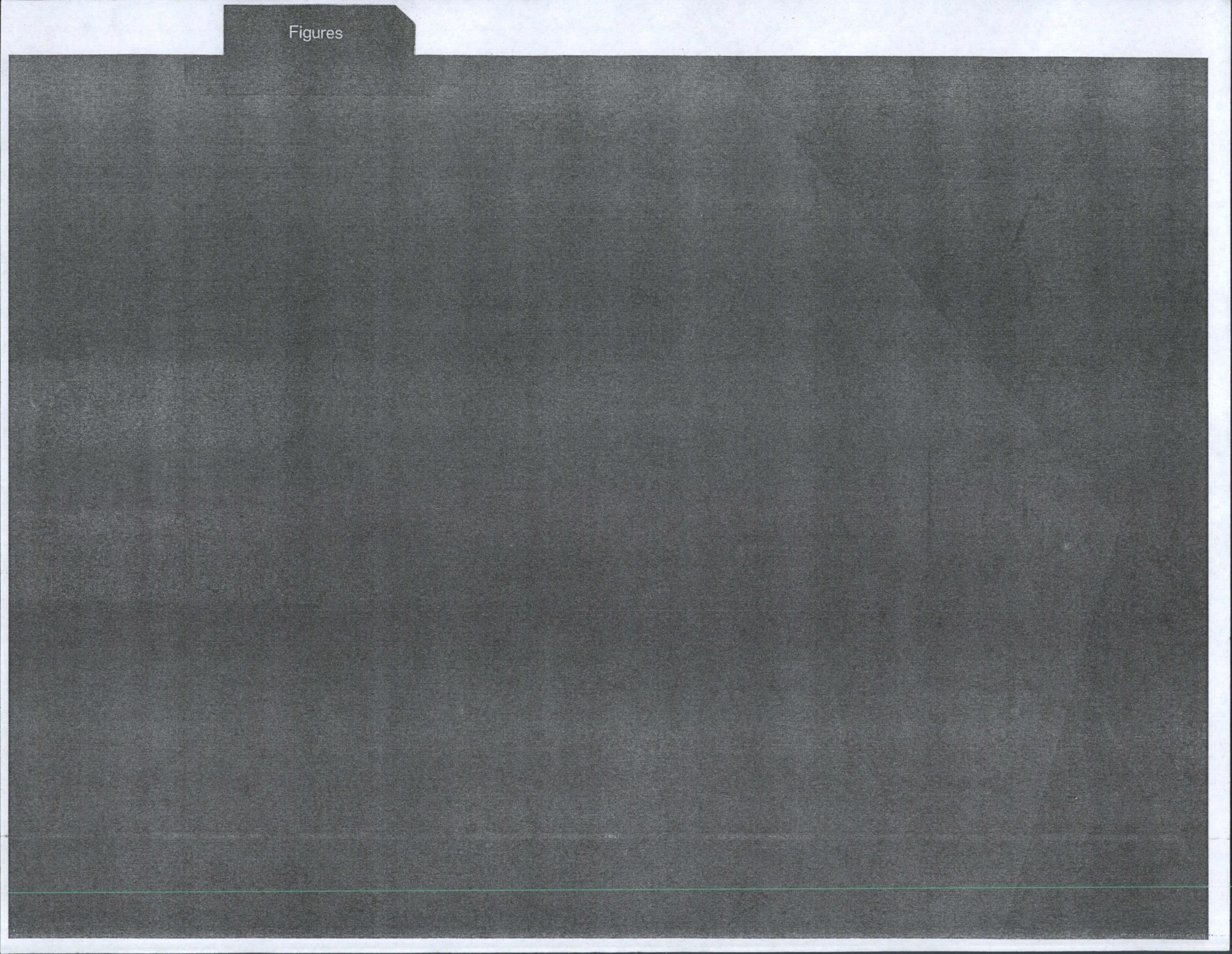
The latitude, longitude, and vertical datum of the water level measuring port of extraction well E-103 were surveyed on 8 December 2014 by Morrison Maierle, Inc. of Tempe, Arizona, an Arizona-licensed land surveyor. The well's elevation was measured to within a vertical accuracy of 0.01 foot from the top of casing relative to the local benchmark. Surveyed well coordinates are provided in the NAD83 state plane coordinate system and reference the NAVD88 vertical datum. The survey data are provided in pdf format in Appendix F.

## References

1. Bierschenk, W.H., 1964. *Determining Well Efficiency by Multiple Step-Drawdown Tests*. International Association of Scientific Hydrology, Publication 64.
2. Haley & Aldrich, Inc., 2014a. *Work Plan to Construct Extraction Well E-103, Phoenix-Goodyear Airport South, Goodyear, Arizona*. 31 January.
3. Haley & Aldrich, Inc., 2014b. *Groundwater Model Update Report, Phoenix-Goodyear Airport South, Goodyear, Arizona*. 21 January.

G:\Projects\Goodyear\39049\_PGA\_South\152\_E-103 Extraction Well\Completion Report\2015-0722\_E-103 Completion Report\_F.docx







Document Path: G:\39049-Phoenix Goodyear Airport\GIS\MapProjects\2015-01\39049-202-001 E-103 pipeline.mxd

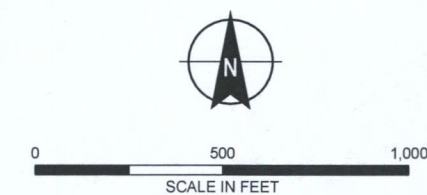


## LEGEND

- EXTRACTION WELL - IN OPERATION
- EXTRACTION WELL - INACTIVE
- INJECTION WELL - IN OPERATION
- INJECTION WELL - INACTIVE
- INJECTION WELL - OBSERVATION
- PRODUCTION WELL - IN OPERATION
- PRODUCTION WELL - INACTIVE
- MONITORING WELL - LOWER SUBUNIT C
- MONITORING WELL - UPPER SUBUNIT C
- MONITORING WELL
- MONITORING WELL - ABANDONED
- NEW PIPING
- EXISTING PIPING
- EXISTING ACCESS ROAD

## NOTES:

1. ALL LOCATIONS AND DIMENSION ARE APPROXIMATE.



**HALEY  
ALDRICH**

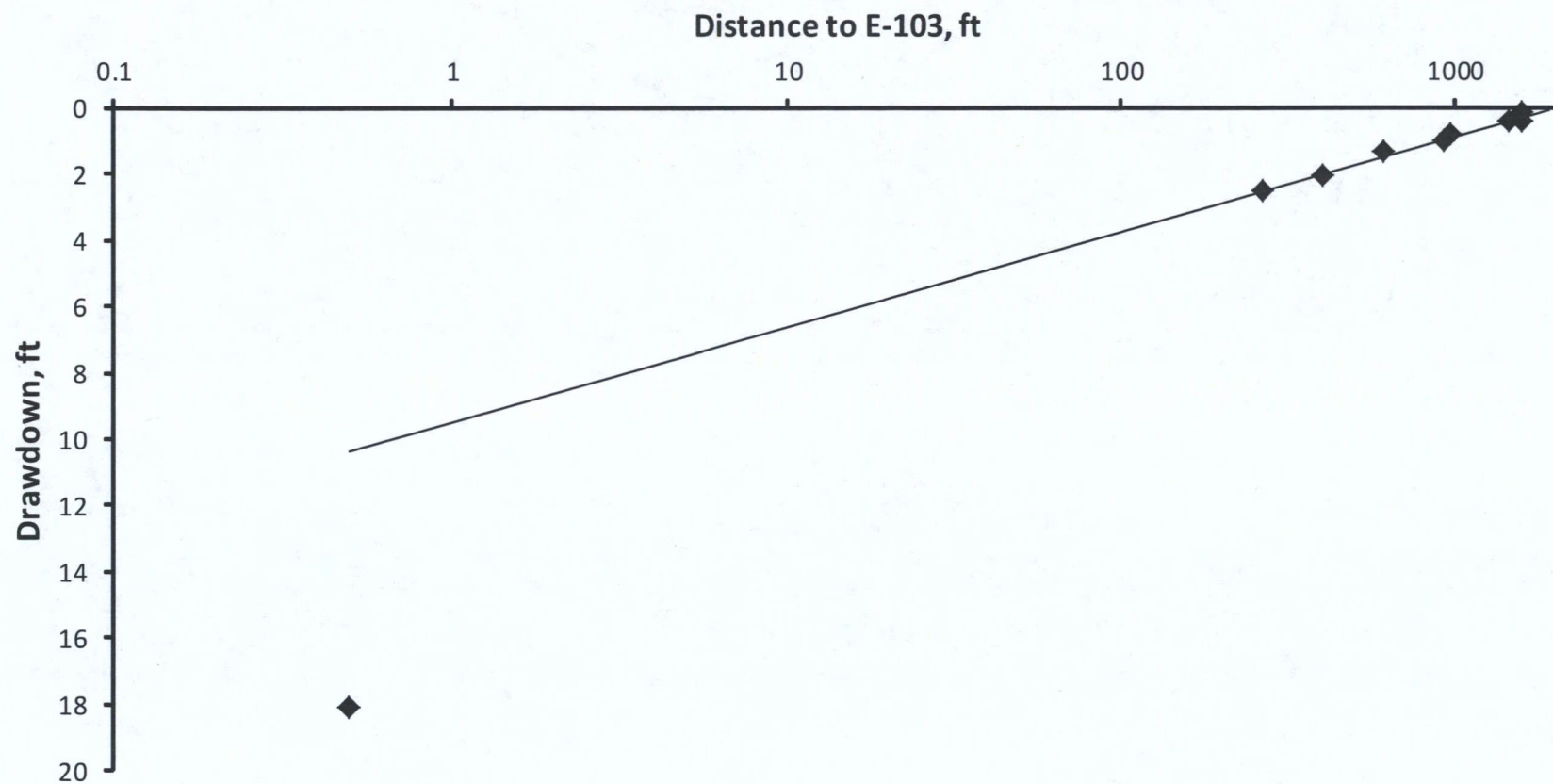
PHOENIX GOODYEAR AIRPORT - SOUTH  
PHOENIX, ARIZONA

## EXTRACTION WELL E-103 AND PIPELINE LOCATION MAP

SCALE: AS SHOWN  
JANUARY 2015

FIGURE 1





**HALEY  
ALDRICH**

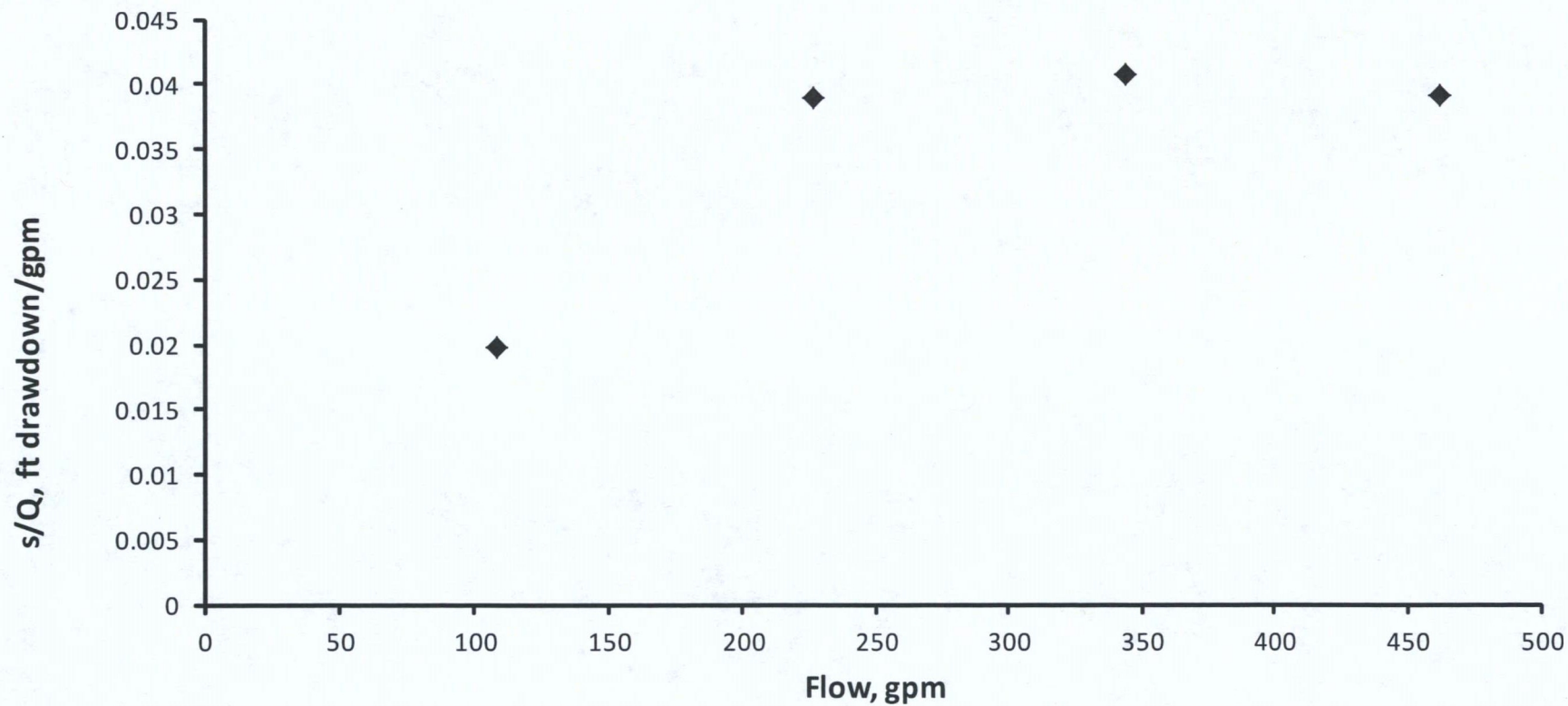
PHOENIX GOODYEAR AIRPORT - SOUTH  
PHOENIX, ARIZONA

DRAWDOWN VS DISTANCE,  
END OF E-103 STEP TEST

SCALE: AS SHOWN  
JANUARY 2015

FIGURE 2





**HALEY  
ALDRICH**

PHOENIX GOODYEAR AIRPORT - SOUTH  
PHOENIX, ARIZONA

STEP-DRAWDOWN TEST DATA -  
S/Q VS Q, E-103

SCALE: AS SHOWN  
JANUARY 2015

FIGURE 3

**APPENDIX A**

**As-Built Drawings**

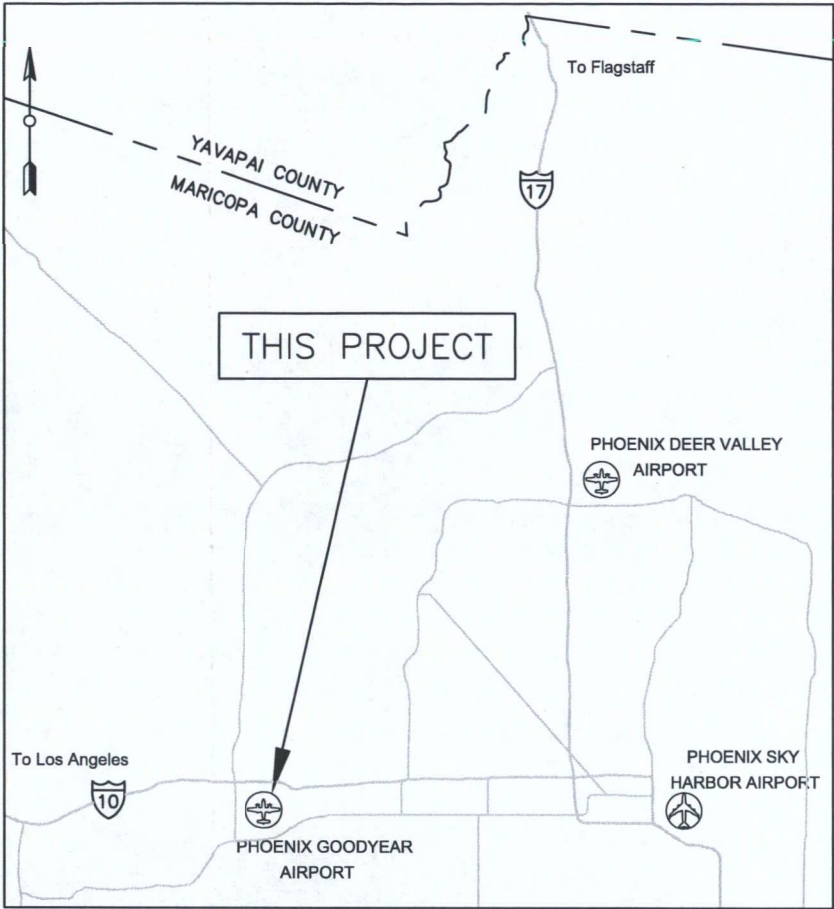
**E-103 As-Built Drawings**



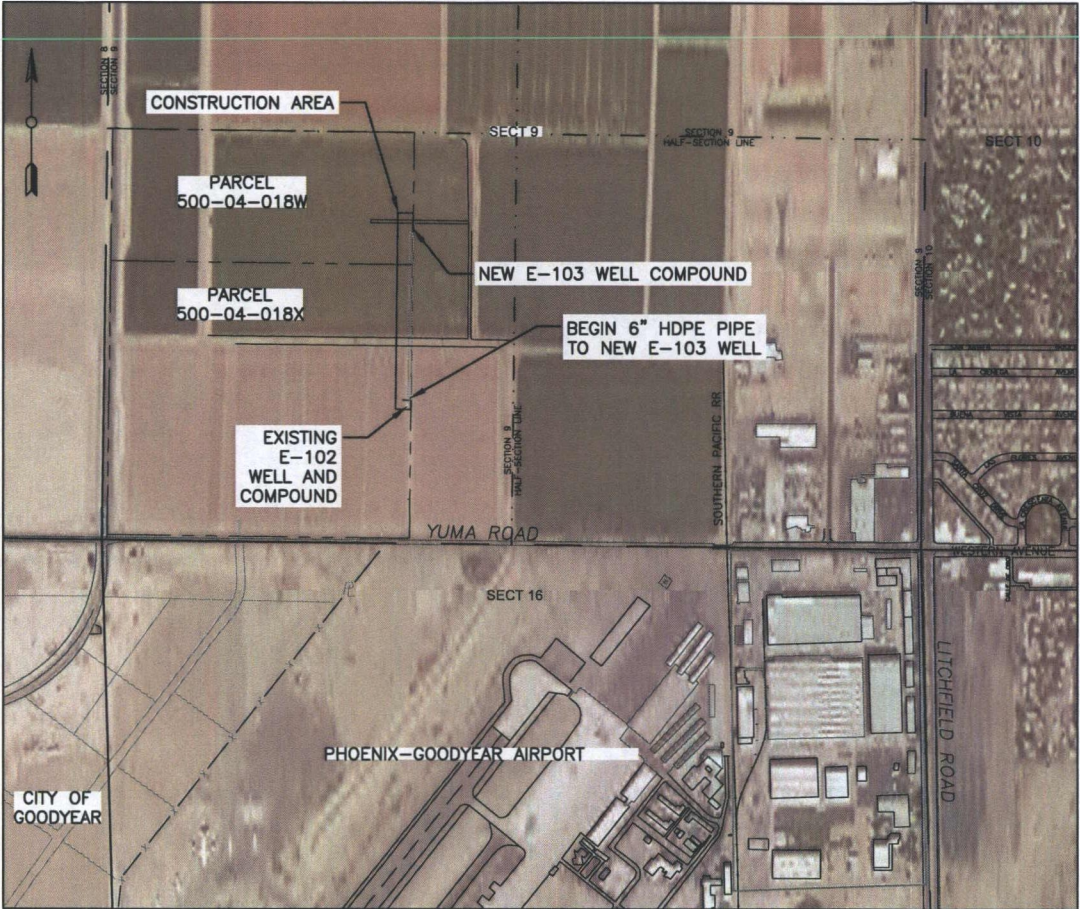
PHOENIX-GOODYEAR AIRPORT  
E-103 WELL AND WATER LINE INSTALLATION  
GOODYEAR, ARIZONA

BLUE STAKE NOTE  
ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100

BENCHMARKS  
BRASS CAP IN WEST HANDHOLE AT  
INTERSECTION OF YUMA ROAD AND  
LITCHFIELD ROAD.  
NORTHING (NAD83): 886208.62  
EASTING (NAD83): 565269.77  
ELEVATION (NAVD88): 964.42  
COTTON PICKER SPINDLE AT THE  
SECTION CORNER AT THE  
INTERSECTION OF BULLARD AVE.  
AND YUMA RD.  
NORTHING (NAD83): 886267.71  
EASTING (NAD83): 559998.78  
ELEVATION (NAVD88): 979.40



LOCATION MAP  
NOT TO SCALE



VICINITY MAP  
1" = 600'  
(SCALE FOR DRAWING FORM 22" X 34")

LEGAL DESCRIPTION FOR  
PROJECT SITE  
TOWNSHIP 1 NORTH, RANGE 1 WEST, SECTIONS  
9 MARICOPA COUNTY, ARIZONA

UTILITIES  
EXISTING INJECTION AND EXTRACTION WATER LINES  
OWNED BY THE GOODYEAR TIRE & RUBBER  
COMPANY

OWNER/DEVELOPER  
THE GOODYEAR TIRE & RUBBER COMPANY  
200 INNOVATION WAY  
AKRON, OHIO 44316  
(330) 796-0578

ENGINEER  
LOS ALAMOS TECHNICAL ASSOCIATES, INC.  
756 PARK MEADOW ROAD  
WESTERVILLE, OHIO 43081  
(614) 508-1200

DRAWING INDEX

DWG #	SHT #	DESCRIPTION	DWG #	SHT #	DESCRIPTION
G-1	1	TITLE SHEET	E-6	14	PLC DISCRETE OUTPUTS
G-2	2	GENERAL NOTES	E-7	15	FUTURE ELECTRICAL SPARE SHEET
G-3	3	LEGEND AND ABBREVIATIONS	E-8	16	FUTURE ELECTRICAL SPARE SHEET
C-1	4	E-103 6" HDPE PIPE PLAN AND PROFILE	E-9	17	FUTURE ELECTRICAL SPARE SHEET
C-2	5	E-102 COMPOUND DETAILS	E-10	18	E-103 INTERNAL PANEL LAYOUT
C-3	6	E-103 COMPOUND DETAILS	E-11	19	E-103 EXTERNAL PANEL LAYOUT
C-4	7	E-103 COMPOUND CONTROL PANEL BUILDING			
C-5	8	E-103 PIPE AND CONDUIT DETAILS			
E-1	9	ONE LINE DIAGRAM AND ELECTRICAL DETAILS			
E-2	10	E-102 ELECTRICAL SCHEMATIC			
E-3	11	ELECTRICAL TIE-IN DETAILS - VFD AND CONTROL BOX			
E-4	12	480/120/24 VOLT POWER			
E-5	13	PLC DISCRETE/ANALOG INPUTS			

AS-BUILT CERTIFICATION	
I HEREBY CERTIFY THAT THE "AS-BUILT" INFORMATION SHOWN HEREON WAS OBTAINED UNDER MY DIRECT SUPERVISION AND IS CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.	
TODD JOSEPH STRUTTMANN BY	1/28/2015 DATE

AS-BUILT HORIZONTAL CONTROL VERIFIED BY ARTHUR A. WITZELL, REGISTERED LAND SURVEYOR, 10/20/2014.  
INFINITY ENGINEERING SERVICES, INC.  
P.O. BOX 88034  
PHOENIX, AZ 85080  
(602) 318-5785

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJ. ENGR.	LEAD ENGR.
5	1/16/15	AS-BUILT	EV	NS	EV	TS
4	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS
3	3/12/14	REVISION TO SHEET 2 - GENERAL NOTES	EV	TS	EV	TS
2	3/3/14	ISSUED FOR BID	TCW	NB	EV	TS
1	2/12/14	100% SITE DESIGN	TCW	NB	EV	TS
0	12/16/13	DESIGN REVIEW	TCW	NB	EV	TS

**LTA**  
(614) 508-1200 (Phone)  
www.lata.com  
Los Alamos Technical Associates, Inc.  
756 Park Meadow Road  
Westerville, OH 43081

PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE  
**TITLE SHEET**

PROJECT NO.: 11124.005  
CADD DWG FILE: G-1 COVER SHEET  
DESIGNED BY: EV DATE: 12/16/13  
DRAWN BY: TCW DATE: 12/16/13  
CHECKED BY: TS DATE: 12/16/13  
**G-1**  
SHEET 1 OF 19



CITY OF GOODYEAR GENERAL NOTES FOR WATER MAIN CONSTRUCTION

PROJECT WILL COMPLY WITH CITY OF GOODYEAR NOTES ONLY AS APPLICABLE TO THE WORK SET FORTH IN THIS PLAN SET.

- A. ALL GENERAL CONSTRUCTION NOTES SHALL APPLY.
- B. ALL CONSTRUCTION SHALL CONFORM TO THE CITY EDS&PM, CITY STANDARD DETAILS, AND CURRENT MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION.
- C. CITY OF GOODYEAR INSPECTORS SHALL BE NOTIFIED 48-HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION, AND EACH INSPECTION REQUESTED (623-882-7979).
- D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND ELEVATION OF ANY UTILITY LINES BEFORE STARTING CONSTRUCTION. IF THE EXISTING LINE IS FOUND TO BE IN A SUBSTANTIALLY DIFFERENT LOCATION, OR WILL ADVERSELY AFFECT THE OPERATION OF THE UTILITY, THE CONTRACTOR SHALL NOTIFY THE CITY OF GOODYEAR PRIOR TO MAKING THE CONNECTIONS. AMENDMENTS TO THE PLANS MAY BE REQUIRED PRIOR TO PROCEEDING WITH CONSTRUCTION ACTIVITIES.
- E. THE CITY OF GOODYEAR IS NOT LIABLE FOR DELAYS OR DAMAGES TO UTILITIES RELATED TO THIS CONSTRUCTION.
- F. AS-BUILT DRAWINGS (ONE SET OF PRINTS FOR EACH REVIEW AND A FINAL SET OF MYLARS), CERTIFIED BY THE DEVELOPER'S ENGINEER, SHALL BE SUBMITTED TO AND ACCEPTED BY THE CITY ENGINEER BEFORE FINAL ACCEPTANCE OF THE WORK. SEE AS-BUILT REQUIREMENTS.
- G. BACKFILLING SHALL NOT BE DONE UNTIL LINES ARE INSPECTED AND APPROVED BY THE CITY CONSTRUCTION INSPECTOR.
- H. MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR ACCORDING TO THE CITY'S APPROVED MATERIALS LIST, EDS&PM CITY STANDARD DETAILS AND MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION. THE APPROVED MATERIALS LIST IS AVAILABLE ON THE CITY WEBSITE OR FROM THE CITY ENGINEERING DEPARTMENT.
- I. ALL SERVICE LINES SHALL BE TYPE K COPPER PIPE OR TUBING. THE MINIMUM SIZE SERVICE SHALL BE ONE-INCH. SERVICE LINES SHALL BE CONTINUOUS UNDER PAVEMENT WITHOUT A CONNECTION OR EXTENSION.
- J. ALL TAPS SHALL USE ALL BRONZE DOUBLE STRAP SERVICE SADDLES.
- K. THE DEVELOPER IS TO INSTALL ALL TAPS AND METER BOXES. THE TAP SHALL TERMINATE WITH AN ANGLE METER VALVE WITHIN THE METER BOX PER CITY STANDARDS.
- L. METERS SHALL BE FURNISHED AND INSTALLED BY THE UTILITY AGENCY AFTER PAYMENT OF ALL PREVAILING FEES.
- M. METERS WILL ONLY BE INSTALLED IF:
1. ALL BACTERIOLOGICAL TESTS AND A COUNTY APPROVAL OF CONSTRUCTION (AOC) LETTER HAVE BEEN RECEIVED.
  2. CURB AND GUTTER HAS BEEN CONSTRUCTED AND THE METER BOX IS INSTALLED TO THE SPECIFIED GRADE PER PLANS.
  3. THE LOT NUMBER AND ADDRESS ARE CLEARLY POSTED.
  4. THE METER BOX IS VISIBLE AND FREE OF OBSTRUCTION AND DAMAGE.
  5. THE METER BOX AND LID ARE PER THE CITY APPROVED MATERIALS LIST.
  6. THE METER BOX AND LID ARE THE CORRECT SIZE.
  7. THE SERVICE LINES AND CONNECTIONS ARE FREE OF LEAKS.
- N. PAVEMENT REPLACEMENTS SHALL BE MADE PER THE CITY EDS&PM, CITY STANDARD DETAILS, AND MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION.
- O. ALL WATER SERVICE CONNECTIONS SHALL BE EXTENDED A SUFFICIENT DISTANCE ACROSS THE RIGHT-OF-WAY TO CLEAR ALL FACILITIES TO BE INSTALLED IN PUBLIC UTILITY EASEMENTS PARALLELING STREET RIGHT-OF-WAY.
- P. TRACER WIRE SHALL BE INSTALLED ON ALL PRIVATE PVC WATER LINES LARGER THAN 6 INCHES.
- Q. ALL WATER LINES 12 INCHES AND LARGER AND RECLAIMED WATER LINES SHALL BE MARKED WITH LOCATING TAPE ONE FOOT ABOVE THE MAIN.
- R. ALL CHANGES IN DIRECTION OF WATER LINES 6 INCHES AND LARGER SHALL BE MARKED WITH AN ELECTRONIC MARKER. ELECTRONIC MARKER SHALL BE A SELF-LEVELING TYPE AND OPERATE ON A FREQUENCY OF 145.7 KHZ UP TO A DEPTH OF 4 FEET.
- S. PRIOR TO ISSUANCE OF WATER PERMITS, STREET SUBGRADE ELEVATIONS SHALL BE GRADED TO WITHIN 0.5 FEET OF THE APPROVED PAVING PLANS; OPEN SPACES, TRACTS, AND RIGHTS-OF-WAYS ELEVATIONS GRADED TO WITHIN 0.3 FEET OF APPROVED GRADING PLAN ELEVATIONS; AND PADS CERTIFIED TO BE AT OR +0.1 FEET ABOVE THE PAD ELEVATIONS AS SHOWN ON THE APPROVED GRADING PLANS.
- T. PRIVATE ON-SITE WATER AND SEWER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE CITY STANDARDS.
- U. ALL DUCTILE IRON WATER LINES LARGER THAN 12 INCHES IN DIAMETER SHALL BE ENCASED IN POLYETHYLENE WRAP PER MAG STANDARD AND MANUFACTURER SPECIFICATIONS.
- V. THE CONTRACTOR MUST REQUEST A METER FOR FILLING AND TESTING OF NEW WATER LINES FROM THEIR ASSIGNED CITY CONSTRUCTION INSPECTOR. THIS METER SHOULD BE ORDERED TWO WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

CITY OF GOODYEAR GENERAL NOTES FOR CONSTRUCTION

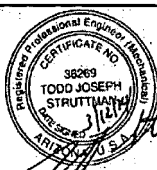
- A. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
- B. ALL CONSTRUCTION SHALL CONFORM TO THE CITY EDS&PM, CITY STANDARD DETAILS, AND CURRENT MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION.
- C. THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH THE CITY REQUIREMENTS PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS. HOWEVER, SUCH REVIEW SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN PLANS FOUND IN TO BE IN VIOLATION OF ANY LAW OR ORDINANCE.
- D. THE CITY DOES NOT WARRANT ANY QUANTITIES SHOWN ON THESE PLANS.
- E. THE CITY APPROVAL IS FOR GENERAL LAYOUT IN THE RIGHT-OF-WAY ONLY. THIS APPROVAL IS VALID FOR A PERIOD OF ONE YEAR. CONSTRUCTION PERMITS SHALL BE OBTAINED DURING THIS PERIOD OR THE PLANS SHALL BE RESUBMITTED FOR REVIEW AND APPROVAL.
- F. AN APPROVED SET OF PLANS SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
- G. THE CITY SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY CONSTRUCTION WORK AND INSPECTIONS (623-882-7979). CONSTRUCTION WORK CONCEALED WITHOUT INSPECTION BY THE CITY CONSTRUCTION INSPECTOR SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
- H. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE CITY ENGINEER, OR DESIGNEE, AND ANY WORK/MATERIAL NOT IN CONFORMANCE WITH CITY ENGINEERING STANDARDS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- I. RIGHT-OF-WAY IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL "AS-BUILT" PLANS HAVE BEEN SUBMITTED AND APPROVED BY THE CITY. (SEE AS-BUILT REQUIREMENTS).
- J. THE DEVELOPER IS RESPONSIBLE FOR THE REMOVAL OR RELOCATION OF ALL OBSTRUCTIONS WITHIN THE RIGHT-OF-WAY PRIOR TO STARTING NEW CONSTRUCTION.
- K. THE DEVELOPER IS RESPONSIBLE FOR ARRANGING THE RELOCATION AND ASSOCIATED COSTS OF ALL UTILITIES. A UTILITY RELOCATION SCHEDULE SHALL BE SUBMITTED PRIOR TO THE ISSUANCE OF PERMITS.
- L. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING OR DEDICATING ALL REQUIRED RIGHTS-OF-WAY AND EASEMENTS TO THE CITY PRIOR TO ISSUANCE OF PERMITS.
- M. THE CONTRACTOR SHALL CONTACT BLUE STAKE (602-263-1100) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL LOCATE ALL CONFLICTS PRIOR TO CONSTRUCTION.
- N. THE CONTRACTOR SHALL BARRICADE CONSTRUCTION SITES AT ALL TIMES PER THE CITY OF PHOENIX TRAFFIC BARRICADE MANUAL. IF NEEDED, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL IN ADVANCE OF CONSTRUCTION.
- O. POTABLE WATER IS NOT AVAILABLE FOR CONSTRUCTION USE OTHER THAN THE FILLING AND TESTING OF NEW LINES. THE UNLAWFUL REMOVAL OF WATER FROM A FIRE HYDRANT OR ANY OTHER SOURCE IS A VIOLATION OF THE MUNICIPAL CODE, PUNISHABLE BY FINE AND/OR IMPRISONMENT.
- P. PRIOR TO MOVING OR DESTROYING PROTECTED NATIVE PLANT SPECIES, THE CONTRACTOR SHALL FILE A FORMAL NOTICE OF INTENT WITH THE ARIZONA DEPARTMENT OF AGRICULTURE (602-542-6408).
- Q. THE CONTRACTOR SHALL COMPLY WITH THE ENVIRONMENTAL PROTECTION AGENCY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER REQUIREMENTS ESTABLISHED FOR CONSTRUCTION SITES, ADEQ GENERAL PERMIT FOR DISCHARGE FROM CONSTRUCTION ACTIVITIES, AND THE CITY OF GOODYEAR STORM WATER MANAGEMENT PLAN.
- R. NO PERSON SHALL USE ANY MECHANICAL EQUIPMENT FOR LAND LEVELING OR CLEARING, ROAD CONSTRUCTION, TRENCHING, EXCAVATING, DEMOLITION, NOR ENGAGE IN ANY EARTHMOVING ACTIVITY WITHOUT FIRST OBTAINING A PERMIT FROM THE MARICOPA COUNTY AIR QUALITY DEPARTMENT (602-506-0666), 1001 N. CENTRAL AVENUE, SUITE 150, PHOENIX, AZ 85003. (THIS NOTICE IS ISSUED PURSUANT TO A.R.S. 36-779.07, NOTICE OF BUILDING AGENCIES).
- S. THESE PLANS REFLECT CONDITIONS AS THEY EXIST AT THE TIME OF DESIGN. IF EXISTING CONDITIONS HAVE CHANGED BY THE TIME OF CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE CITY AND THESE PLANS MAY HAVE TO BE AMENDED PRIOR TO PROCEEDING WITH CONSTRUCTION ACTIVITIES.

PROJECT SPECIFIC NOTES

- A. IN ADDITION TO NOTES B, H, AND T OF CITY OF GOODYEAR GENERAL NOTES FOR WATER MAIN CONSTRUCTION, AND NOTE B OF THE CITY OF GOODYEAR GENERAL NOTES FOR CONSTRUCTION ALL CONSTRUCTION SHALL CONFORM WITH THIS PLAN SET. IN THE EVENT THAT THERE IS A CONFLICT, THIS PLAN SET TAKES PRECEDENCE.
- B. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OR RELOCATION OF ALL OBSTRUCTIONS WITHIN THE RIGHT-OF-WAY PRIOR TO STARTING CONSTRUCTION.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING AND OPERATING WITHIN THE GUIDELINES SET FORTH BY OSHA, THE USEPA, AND ANY OTHER REGULATORY AGENCY OR POLITICAL ENTITY HAVING JURISDICTION OVER THE PROJECT.
- D. THE CONTRACTOR SHALL CONDUCT THE WORK ACTIVITY IN SUCH MANNER AS TO MINIMIZE THE RELEASE OF ANY EXISTING MATERIALS (WASTE OR OTHERWISE) TO THE ENVIRONMENT.

PROJECT SPECIFIC NOTES (CONTINUED):

- E. THE CONTRACTOR IS REQUIRED TO SUPPLY AND INSTALL ANY EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED BY LAW OR AS DIRECTED BY THE PROJECT OWNER.
- F. THE CONTRACTOR SHALL COMPLY WITH BASIC PROVISIONS OF OSHA HEALTH AND SAFETY STANDARDS 29 CFR 1910 AND GENERAL CONSTRUCTION STANDARDS (29 CFR 1926) AS APPROPRIATE TO THIS CONSTRUCTION.
- G. AREAS DENOTED ON THE PLAN SET AS "WORK BY OTHERS" ARE NOT INCLUDED IN THIS SCOPE OF WORK.
- H. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESEARCH, APPLY FOR, PAY FOR, OBTAIN, ARRANGE INSPECTIONS, AND FULFILL ALL REQUIRED PERMITS TO COMPLETE THE WORK.
- I. THE OWNER'S ON-SITE ENGINEER SHALL INSPECT AND APPROVE ALL PIPE BEFORE BACKFILLING.
- J. THE CONTRACTOR SHALL CONTACT BLUE STAKE (602) 263-1100 AT LEAST 48 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL LOCATE ALL CONFLICTS PRIOR TO CONSTRUCTION.
- K. THE CONTRACTOR SHALL COMPLY WITH THE ENVIRONMENTAL PROTECTION AGENCY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER REQUIREMENTS ESTABLISHED FOR CONSTRUCTION SITES, ADEQ GENERAL PERMIT FOR DISCHARGE FROM CONSTRUCTION ACTIVITIES, AND THE CITY OF GOODYEAR STORM WATER MANAGEMENT PLAN.
- L. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE MARICOPA COUNTY AIR QUALITY DEPARTMENT AIR POLLUTION CONTROL REGULATIONS INCLUDING RULE 310 FUGITIVE DUST FROM DUST-GENERATING OPERATIONS.
- M. THE CONTRACTOR SHALL CONDUCT ALL WORK ACTIVITIES WITHIN THE BOUNDS OF THE CONSTRUCTION EASEMENT.
- N. HDPE PIPE SPECIFICATION:
1. MATERIAL: PE3408/3608 RESIN CONFORMING TO ASTM D 3350 AND CELL CLASSIFICATION OF 345464C AND IS LISTED WITH THE PLASTIC PIPE INSTITUTE.
  2. TEMPERATURE RATING: 140°F.
  3. DIMENSION RATIO (DR): 11 (DIPS) WITH A PRESSURE RATING OF 160 PSI.
  4. FITTINGS: SAME PRESSURE RATING, RESIN TYPE, AND CELL CLASSIFICATION AS ADJOINING PIPE. MOLDED FITTINGS SHALL BE IN ACCORDANCE WITH ASTM D2683, ASTM D3261 FOR BUTT-TYPE FITTINGS, OR ASTM F1055 FOR ELECTROFUSION-TYPE FITTINGS.
  5. JOINTS: BUTT FUSION IN ACCORDANCE WITH ASTM F 2620.
  6. MANUFACTURERS: DRISCOPIPE, AS MANUFACTURED BY PHILLIPS, JM EAGLE, OR APPROVED EQUAL.
- O. TRACER WIRE IS REQUIRED FOR ALL UNDERGROUND UTILITIES. TRACER WIRE SHALL BE #12 POLYETHYLENE JACKETED, 45-MIL SOLID COPPER. TRACER WIRE SHALL BE TERMINATED TO THE SURFACE IN "SOUNDING" BOXES PLACED AS LOCATED ON THE DRAWINGS. THE CONTRACTOR SHALL ENSURE THE INTEGRITY OF ALL TRACER WIRE.
- P. UNDERGROUND WARNING TAPE SHALL BE INSTALLED IN TRENCHES FOR ALL OPEN-CUT BURIED PIPING. TAPE SHALL BE 5 MILS THICK, 6 INCHES WIDE WITH ALUMINUM BACKING, AND SUITABLE FOR DIRECT BURIAL. TAPE SHALL READ "CAUTION PIPE BURIED BELOW" OR SIMILAR.
- Q. HYDROSTATIC TEST SPECIFICATIONS:
1. THE CONTRACTOR SHALL PROVIDE ALL WATER, VENTS, PIPING, PLUGS, TAPS, BULKHEADS, VALVES, BRACING, BLOCKING, PUMPS, MEASURING DEVICES, AND ALL OTHER NECESSARY EQUIPMENT FOR COMPLETION OF A HYDROSTATIC TEST OF ALL INSTALLED PIPING IN ACCORDANCE WITH ANSI/AWWA C600. NO TESTING SHALL BE PERFORMED AGAINST CLOSED VALVES. TESTING SHALL NOT BE PERFORMED "OUT OF TRENCH".
  2. THE TEST SETUP AND TEST PARAMETERS SHALL BE SUBMITTED TO THE ENGINEER AT LEAST 24 HOURS PRIOR TO ACTUAL TESTING. THE ENGINEER SHALL PROVIDE NOTIFICATION TO PROCEED WITH TESTING BASED ON THE CONTRACTOR'S SUBMITTAL. THE TEST SHALL ONLY BE CONDUCTED WITH THE ENGINEER PRESENT.
  3. THE HYDROSTATIC PRESSURE TESTING SHALL CONSIST OF PURGING THE LINE OF AIR AS IT IS FILLING COMPLETELY WITH POTABLE WATER. THE WATER, PIPE, AND SOIL TEMPERATURE SHALL BE ALLOWED TO EQUILIBRATE AND STABILIZE (24 HOURS AT SLIGHT PRESSURE). THE PIPE AND WATER SHALL THEN BE PRESSURIZED TO A MINIMUM OF 1.5 TIMES THE WORKING PRESSURE OF THE PIPE (130 PSI) AND HELD AT THAT PRESSURE FOR AT LEAST 2 CONTINUOUS HOURS WITHOUT LOSING MORE THAN 5 PSI OR THE ALLOWABLE MAKEUP WATER (0.6 GALLONS PER 100' OF PIPE).
  4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL DISPOSITION OF ALL MAKEUP WATER.
  5. THE TEST PRESSURE CANNOT VARY BY MORE THAN ±5 PSI FROM THE REQUIRED PRESSURE FOR THE DURATION OF THE TEST. IF AT ANY POINT DURING THE TEST THE PRESSURE LOSS EXCEEDS 5 PSI, THE TEST IS A FAILURE. MAKEUP WATER IN EXCESS OF THE CALCULATED VOLUME (SEE NOTE 4) CONSTITUTES A FAILED TEST.
  6. THE CONTRACTOR SHALL REPAIR AND RE-TEST ANY PORTION OF THE PIPELINE THAT DOES NOT MEET THE TEST REQUIREMENTS AT NO ADDITIONAL COST.
  7. THE CONTRACTOR SHALL PROVIDE DETAILED WRITTEN RECORDS OF THE TEST INCLUDING, BUT NOT LIMITED TO, A SKETCH OF THE SETUP, RECORDING OF PRESSURES, FILL AND MAKEUP WATER, RATE OF FILLING, AND TEST DURATION.
- R. HDPE CONDUIT SHALL BE USED FOR HORIZONTAL RUNS OF UNDERGROUND CONDUIT FOR COMMUNICATION AND ELECTRIC LINES. THE CONDUIT SHALL BE SPECIFICALLY LISTED AS AN ELECTRICAL CONDUIT AND SUITABLE FOR DIRECT BURY. PULL TAPE OR ROPE SHALL BE INSTALLED IN ALL CONDUIT RUNS.
- S. CONDUIT ELBOWS AND TURN-UPS SHALL BE RGS. CONDUIT ELBOWS SHALL BE LONG SWEEP.



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT CHK	PROJ ENGR	LEAD ENGR
5	1/16/15	AS-BUILT	EV	NS	EV	TS
4	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS
3	3/12/14	ADDED COG GENERAL NOTES FOR CONSTRUCTION	EV	TS	EV	TS
2	3/3/14	ISSUED FOR BID	EV	BK	EV	TS
1	2/12/14	100% SITE DESIGN	EV	BK	EV	TS
0	12/18/13	DESIGN REVIEW	TCW	NB	EV	TS

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PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

GENERAL NOTES

PROJECT NO:	11124.005
CADD DWG FILE:	G-2 GENERAL NOTES
DESIGNED BY:	EV
DRAWN BY:	TCW
CHECKED BY:	TS
DATE:	12/16/13
DATE:	12/16/13
DATE:	12/16/13
G-2	
SHEET 2 OF 19	

GENERAL ABBREVIATIONS

ABC	AGGREGATE BASE COURSE	INJ.	INJECTION
A.C.	ASPHALT CONCRETE	I/O	INPUT/OUTPUT
AC	ALTERNATING CURRENT	LBS	POUNDS
APPROX	APPROXIMATELY	LIT	LEVEL INDICATING TRANSMITTER
APS	ARIZONA PUBLIC SERVICE	MA	MILLIAMPS
AWG	AMERICAN WIRE GAUGE	MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
BV	BUTTERFLY VALVE	MJ	MECHANICAL JOINT
CFR	CODE OF FEDERAL REGULATIONS	NPDES	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
CLSM	CONTROLLED LOW STRENGTH MATERIAL	NTS	NOT TO SCALE
COG	CITY OF GOODYEAR	O.D.	OUTER DIAMETER
CONC.	CONCRETE	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
C.S.	CARBON STEEL	PLC	PROGRAMMABLE LOGIC CONTROLLER
CV	CHECK VALVE	PSI	POUNDS PER SQUARE INCH
DEG	DEGREES	PSV	PRESSURE SUSTAINING VALVE
DC	DIRECT CURRENT	PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON	RED.	REDUCING
DIPS	DUCTILE IRON PIPE SIZE	RGS	RIGID GALVANIZED STEEL
DISC.	DISCONNECT	SCH	SCHEDULE
DR	DIMENSION RATIO	SDR	STANDARD DIMENSION RATIO
DWG	DRAWING	SQ	SQUARE
EDS&PM	ENGINEERING DESIGN STANDARDS & POLICIES MANUAL	STA	STATION
ELEV	ELEVATION	TYP	TYPICAL
EOP	EDGE OF PAVEMENT	THWN	THERMOPLASTIC HEAT AND WATER RESISTANT NYLON-COATED
FIT	FLOW INDICATING TRANSMITTER	TWSP	TWISTED WIRE SHIELDED PAIR
FLG	FLANGED	USEPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
FLJ	FLANGE JOINT	UV	ULTRAVIOLET
FMC	FLEXIBLE METAL CONDUIT	V	VOLT
FT	FEET	VFD	VARIABLE FREQUENCY DRIVE
GAC	GRANULAR ACTIVATED CARBON	W	WATTS
GND	GROUND	XFMR	TRANSFORMER
GTRC	THE GOODYEAR TIRE & RUBBER COMPANY	XHHW	CROSS-LINKED POLYETHYLENE HIGH HEAT RESISTANT INSULATED WIQS RE
GV	GATE VALVE		
HDPE	HIGH-DENSITY POLYETHYLENE		
HZ	HERTZ		

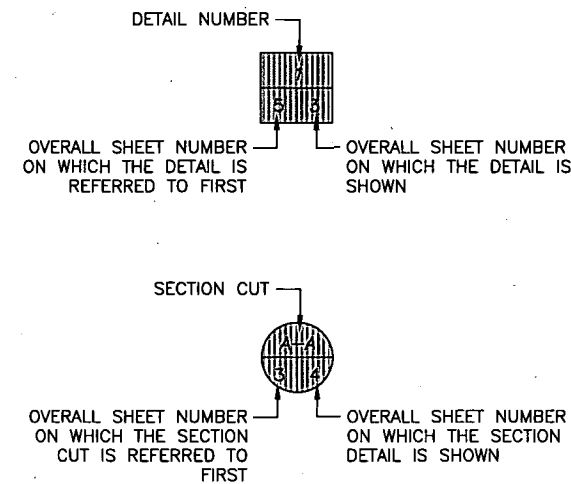
DRAWING IDENTIFICATION SYSTEM

IDENTIFYING LETTER FOR GROUP OF DRAWINGS → G - 2 ← SHEET NUMBER WITHIN GROUP

IDENTIFYING LETTERS FOR GROUP OF DRAWINGS

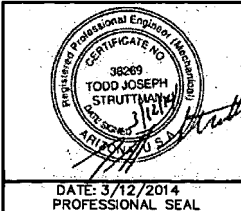
C - CIVIL  
E - ELECTRICAL  
G - GENERAL

SECTION AND DETAIL IDENTIFICATION SYSTEM



GENERAL SYMBOLS

- PROPERTY OR LEASE BOUNDARY
- CE — CONSTRUCTION EASEMENT
- ME — MAINTENANCE EASEMENT
- FENCE
- TOPOGRAPHIC CONTOUR
- ⊙ EXTRACTION WELL
- CONCRETE
- UNDISTURBED EARTH
- RIP-RAP/GRAVEL
- PIPE FOUNDATION
- PIPE BEDDING
- BACKFILL



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT CHK	PROJ ENGR	LEAD ENGR
3	1/16/15	AS-BUILT	EV	NS	EV	TS
2	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS
1	2/12/14	100% SITE DESIGN	EV	BK	EV	TS
0	3/3/14	ISSUED FOR BID	TCW	NB	EV	TS

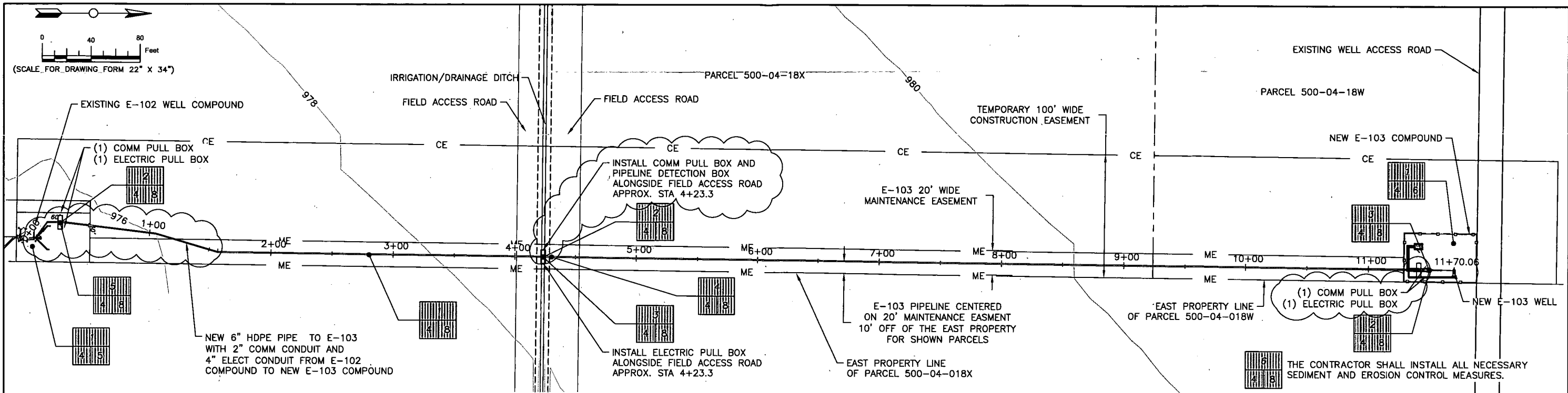


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GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

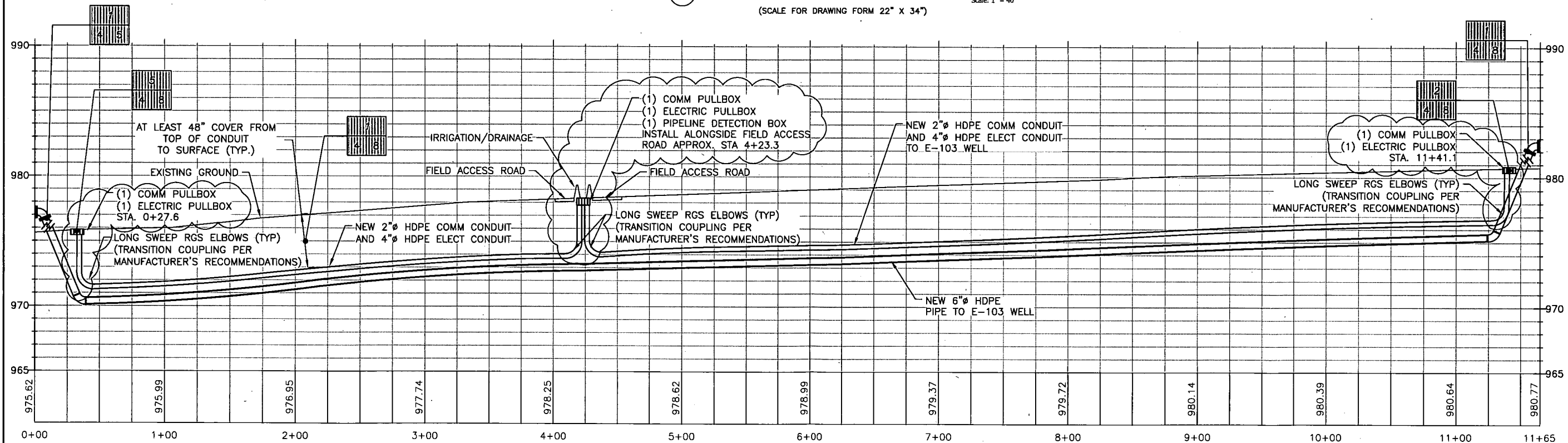
LEGEND AND ABBREVIATIONS

PROJECT NO:	11124.005
CADD DWG FILE:	G-3 LEGEND AND ABBREV
DESIGNED BY:	EV
DATE:	12/16/13
DRAWN BY:	TCW
DATE:	12/16/13
CHECKED BY:	TS
DATE:	12/16/13
G-3	
SHEET 3 OF 19	



1 E-103 PLAN 6" HDPE WATERLINE AND CONDUIT(S)

(SCALE FOR DRAWING FORM 22" X 34")



2 E-103 PROFILE 6" HDPE WATERLINE AND CONDUIT(S)

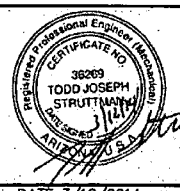
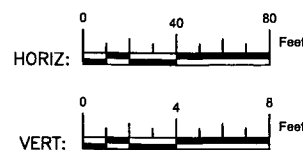
(SCALE FOR DRAWING FORM 22" X 34")

**\*\*NOTE\*\***

THE CONTRACTOR SHALL FIELD VERIFY AND PROTECT ALL UTILITIES AND CALL IN ADVANCE OF CONSTRUCTION. IF ANY UTILITIES, SHOWN IN THIS DRAWING SET OR OTHERWISE, ARE DAMAGED AS A RESULT OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST TO REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER OR ENGINEER.

**BLUE STAKE NOTE**

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJ. LEAD	ENGR.
4	1/16/15	AS-BUILT	EV	NS	EV	TS
3	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS
2	3/3/14	ISSUED FOR BID	TCW	NB	EV	TS
1	2/12/14	100% SITE DESIGN	TCW	NB	EV	TS
0	12/16/13	DESIGN REVIEW	TCW	NB	EV	TS



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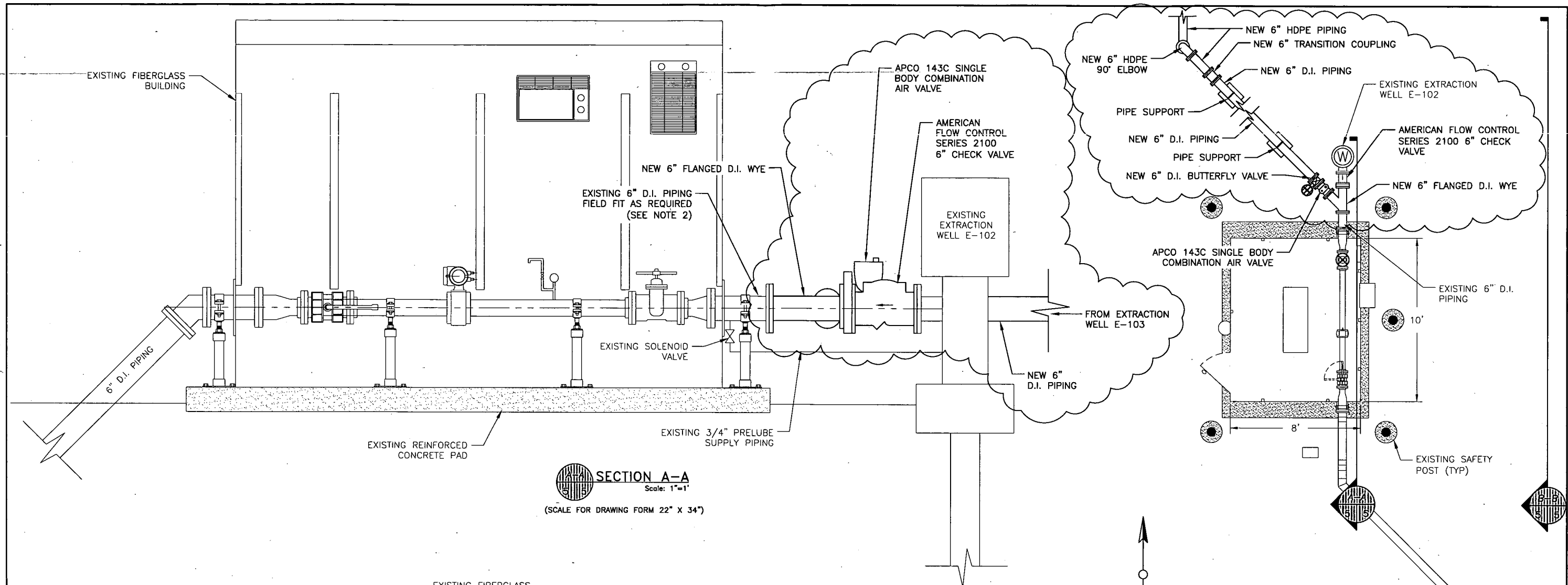
PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

**E-103 6" HDPE PIPE  
PLAN AND PROFILE**

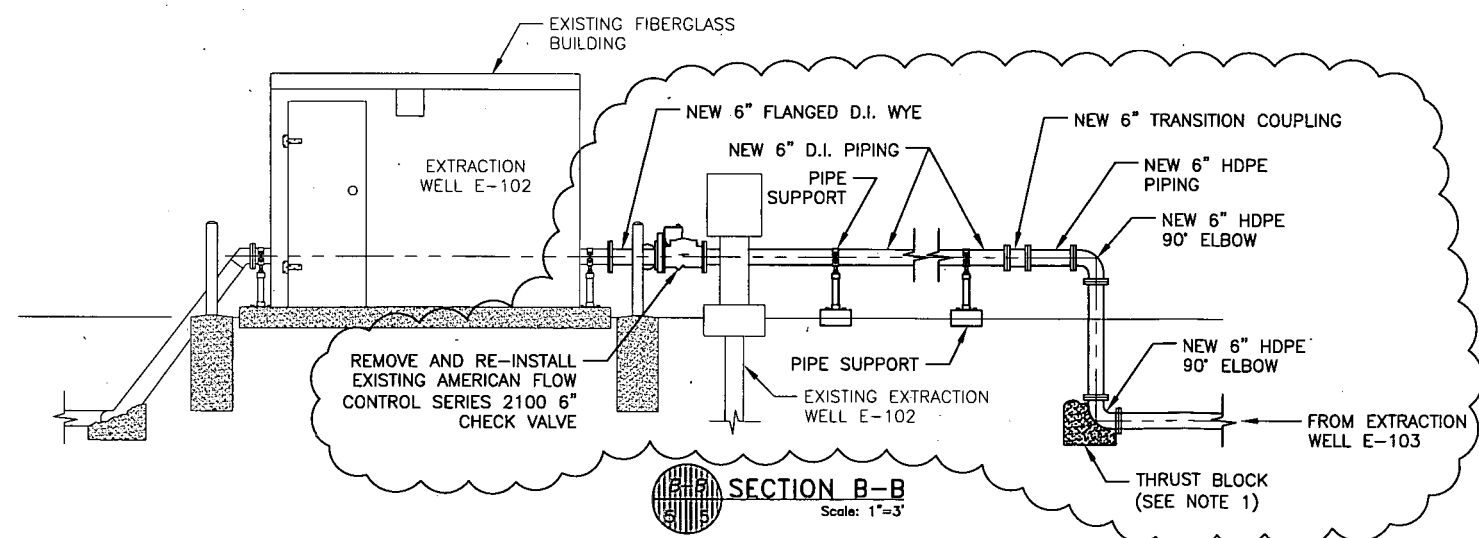
PROJECT NO:	11124.005
CADD FILE:	C-1 E-103 PLAN AND PROFILE
DESIGNED BY:	EV
CHECKED BY:	TCW
DATE:	12/16/13

**C-1**

SHEET 4 OF 19



**SECTION A-A**  
Scale: 1"=1'  
(SCALE FOR DRAWING FORM 22" X 34")



**SECTION B-B**  
Scale: 1"=3'  
(SCALE FOR DRAWING FORM 22" X 34")

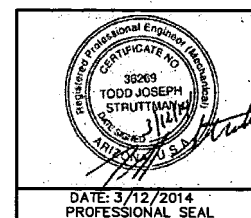
**FIBERGLASS BUILDING PLAN**  
Scale: 1"=3'  
(SCALE FOR DRAWING FORM 22" X 34")

EQUIPMENT	LOCATION	QTY	MAKE/MODEL NUMBER	NOTES
6" D.I. CHECK VALVE	6" E-103 D.I. DISCHARGE LINE (SEE SHEET C-3)	1	AMERICAN FLOW CONTROL SERIES 2100 D.I. RESILIENT SEATED CHECK VALVE	FLANGED, EQUIPPED WITH OPTIONAL OPEN/CLOSED INDICATOR
6" D.I. BUTTERFLY VALVE	6" E-102 AND E-103 D.I. DISCHARGE LINE	2	NIBCO BUTTERFLY VALVE, D.I. LD2000 LUG STYLE. 200 PSI W/ LEVER	ENGINEER APPROVED EQUAL IS ACCEPTABLE
6" FLEXIBLE EXPANSION JOINT	6" E-102 AND E-103 D.I. DISCHARGE LINE	2	GENERAL RUBBER MAXI-JOINT STYLE 1101 W/ CONTROL UNITS. MATERIALS OF CONSTRUCTION: EPDM	ENGINEER APPROVED EQUAL IS ACCEPTABLE
AIR/VACUUM RELIEF VALVE	6" E-103 D.I. DISCHARGE LINE (SEE SHEET C-3)	1	APCO 143C SINGLE BODY COMBINATION AIR VALVE	1" NPT CONNECTION

**EQUIPMENT LIST**

**NOTES:**

1. THRUST BLOCKING OR JOINT RESTRAINTS SHALL CONFORM TO MAG SPECIFICATIONS STANDARD DETAIL NO. 380 OR 303-1 & 2.
2. GENERAL CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS FOR THE INSTALLATION OF NEW BUTTERFLY VALVE AND WYE CONNECTION.



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	CHK	PROJ	LEAD	ENG
4	1/16/15	AS-BUILT	EV	NS	EV	TS		
3	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS		
2	3/3/14	ISSUED FOR BID	NB	TCW	EV	TS		
1	2/12/14	100% SITE DESIGN	NB	TCW	EV	TS		
0	12/16/13	DESIGN REVIEW	NB	TCW	EV	TS		



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E-103 WELL AND PIPELINE

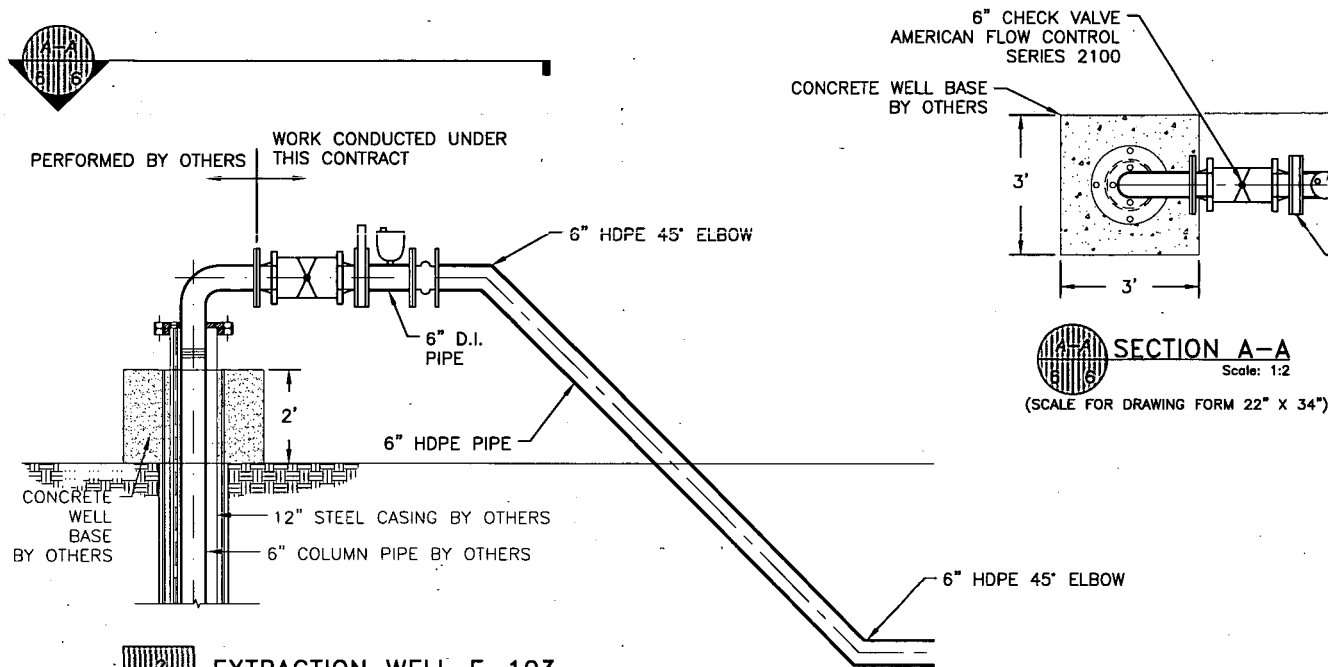
**E-102 COMPOUND DETAILS**

PROJECT NO:	11124.005
CADD DWG FILE:	C-2 E-102 DETAILS
DESIGNED BY:	EV
DRAWN BY:	NB
CHECKED BY:	TJS
DATE:	12/16/13
DATE:	12/16/13
DATE:	12/16/13

**C-2**

SHEET 5 OF 19





**SECTION A-A**  
Scale: 1:2  
(SCALE FOR DRAWING FORM 22" X 34")

- NOTES:
- GROUND WIRE CAD WELDED TO WELL CASING.
  - DRILLING CONTRACTOR SHALL PLACE 3' X 3' X 2' CONCRETE WELL BASE AROUND WELL HEAD.
  - OWNER SHALL SUPPLY GRUNDFOS SUBMERSIBLE PUMP MODEL 475S400-4, 40 HP, 7-INCH DIAMETER.
  - DRILLING WELL, SETTING CASING, DEVELOPING WELL, CONCRETE WELL BASE, SETTING PUMP, AND PULLING ELECTRICAL WIRES FROM WELL PUMP TO E-103 CONTROL PANEL WILL BE PERFORMED BY OTHERS.
  - GENERAL CONTRACTOR IS RESPONSIBLE FOR: MAKING FINAL ELECTRICAL AND CONTROL CONNECTIONS INSIDE E-103 CONTROL PANEL AND INSTALLING LEVEL TRANSDUCER.
  - OWNER WILL STAKE THE PROPERTY/LEASED BOUNDARY AND/OR PROVIDE COORDINATES OF PROPERTY/LEASED BOUNDARY. BOUNDARIES SHOWN ON DRAWINGS ARE APPROXIMATE.

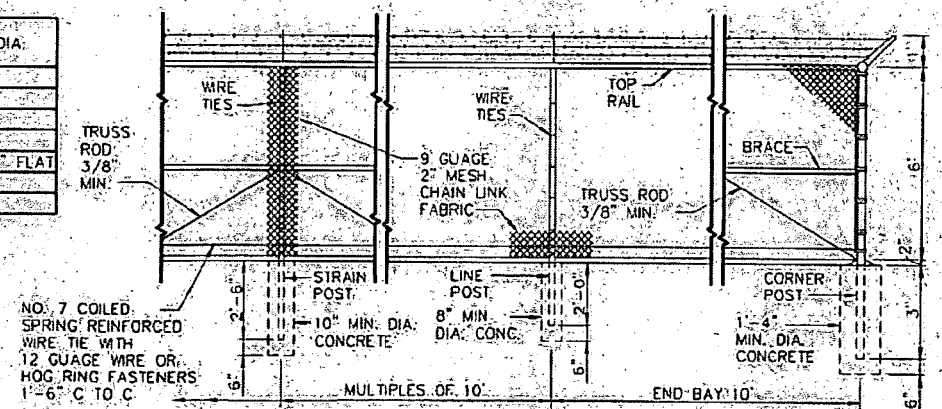
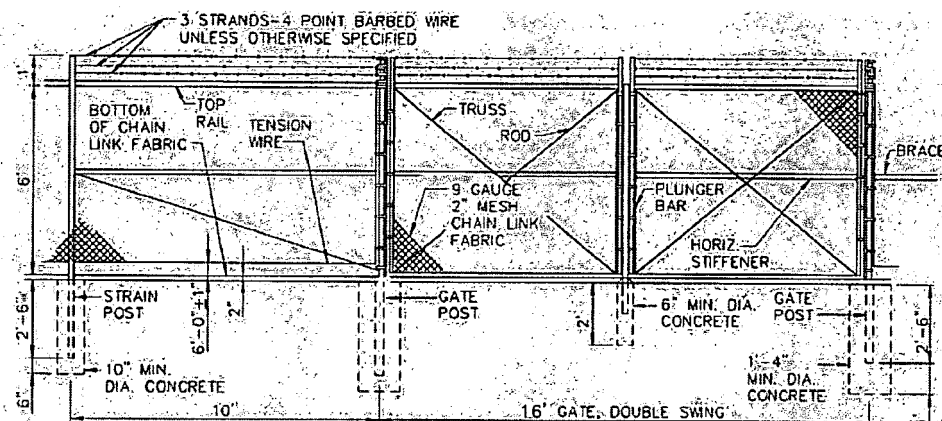
**EXTRACTION WELL E-103**  
Scale: N.T.S.

**NOTES**

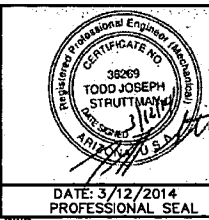
- ALL CONCRETE SHALL BE CLASS 'C' PER SECT. 725.
- FITTINGS NOT SPECIFICALLY DETAILED SHALL BE HEAVY DUTY DESIGN.
- STRAIN POSTS SHALL BE SPACED AT 500' MAXIMUM SPACING.
- BOTH CORNER AND STRAIN POSTS SHALL HAVE STRAIN PANELS.
- ALL POSTS SHALL BE CAPPED.
- MEMBER SIZES SHALL BE THE FOLLOWING:

MEMBER	AISC SIZE	OUTSIDE DIA.
CORNER POST	2-1/2"	2.875"
LINE POST	1-1/2"	1.900"
STRAIN POST	1-1/2"	1.900"
BRACE	1-1/4"	1.666"
STRETCH BAR	3/16"x3/4" FLAT	3/16"x3/4" FLAT
GATE POST	3-1/2"	4.000"
TOP RAIL	1-1/4"	1.666"

7. CONSTRUCTION AND MATERIALS SHALL CONFORM TO SECT. 420 AND 722, RESPECTIVELY. SEE TABLE 722 FOR WEIGHTS OF MEMBERS.



**FENCE DETAILS**  
Scale: N.T.S.



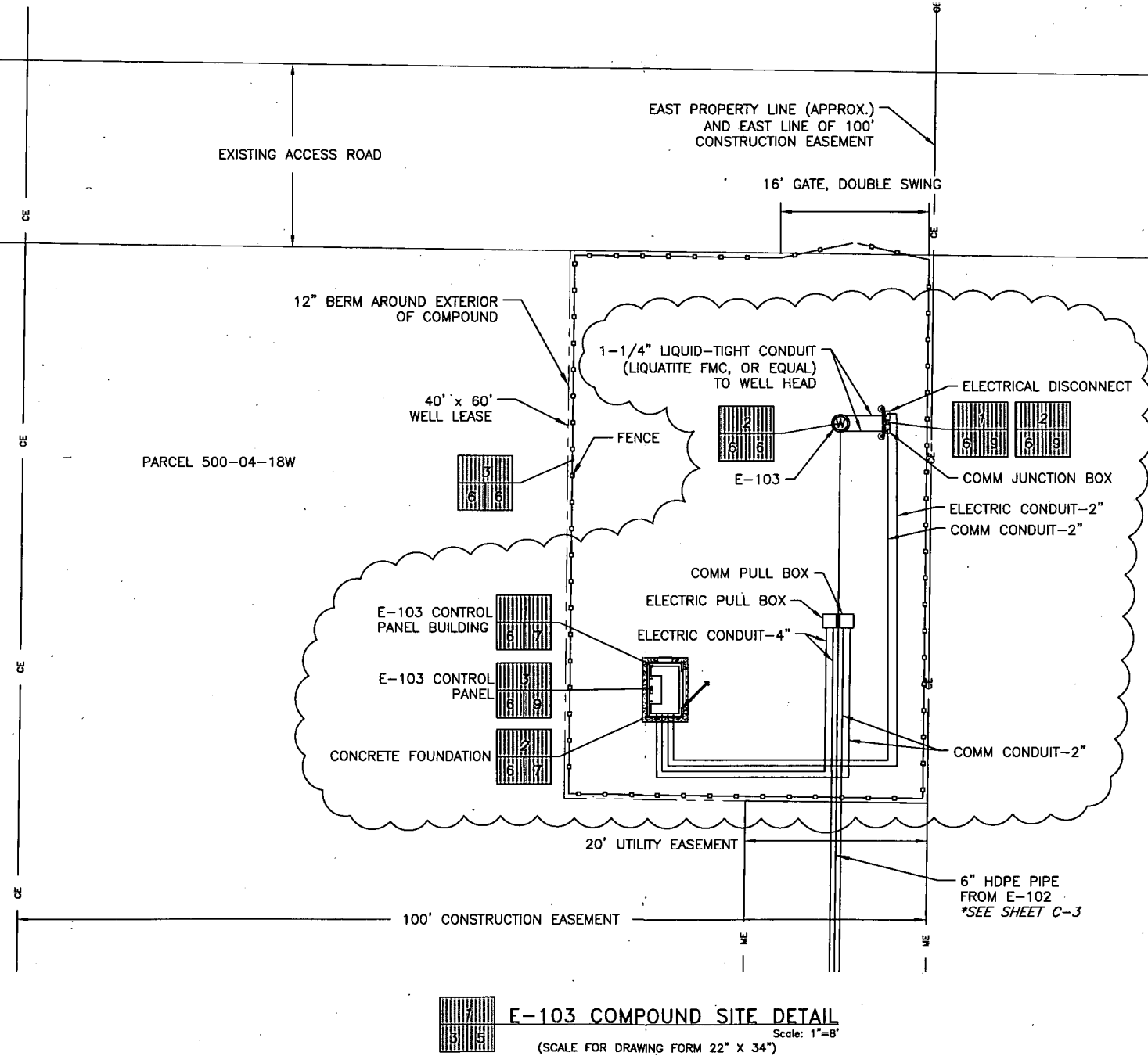
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4	1/16/15	AS-BUILT	EV	NS	EV	TS
3	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS
2	3/3/14	ISSUED FOR BID	NB	TCW	EV	TS
1	2/12/14	100% SITE DESIGN	NB	TCW	EV	TS
0	12/18/13	DESIGN REVIEW	NB	TCW	EV	TS

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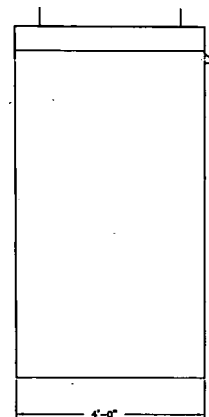
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GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

**E-103 COMPOUND DETAILS**

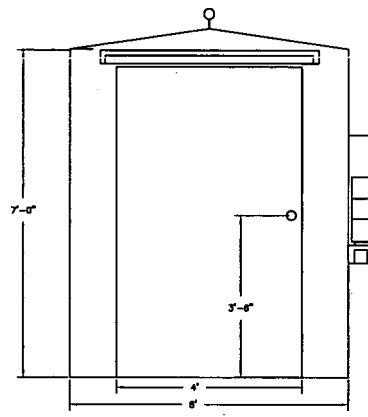
PROJECT NO.	11124.005
CADD DWG FILE	C-3 E-103 DETAILS
DESIGNED BY:	EV
DRAWN BY:	NB
CHECKED BY:	TS
DATE:	12/16/13
DATE:	12/16/13
DATE:	12/16/13
<b>C-3</b>	
SHEET 6 OF 19	



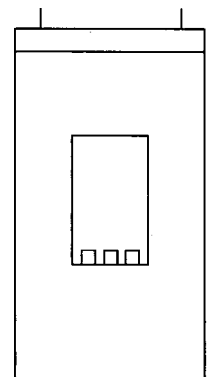
**E-103 COMPOUND SITE DETAIL**  
Scale: 1"=8'  
(SCALE FOR DRAWING FORM 22" X 34")



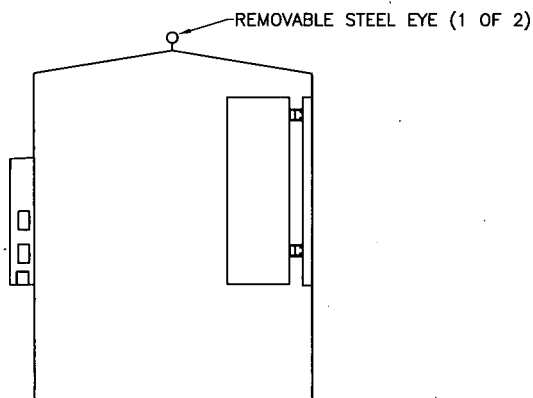
LEFT ELEVATION VIEW



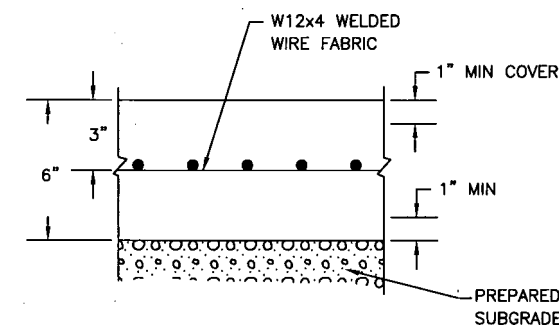
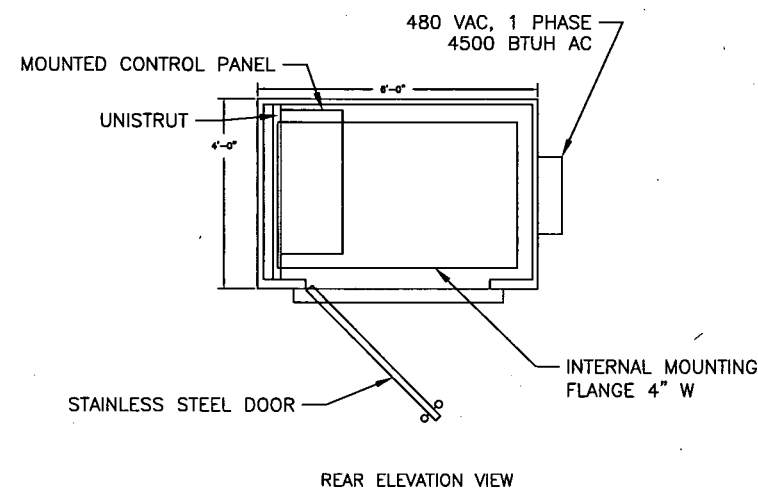
FRONT ELEVATION VIEW



RIGHT ELEVATION VIEW



REAR ELEVATION VIEW



E-103 PROPOSED CONTROL PANEL BUILDING

(SEE NOTE 1)

Scale: N.T.S.

NOTES

1. Building shall be WEECI one-piece fiberglass building, 6'-0" W. X 4'-0" D X 7'-6" H, manufactured by TRACOM, Inc., 6575 Industrial Way, Alpharetta, GA 30004 (www.tracomfrp.com). Options shall include Gray Cloud gel coat with U.V. inhibitors; 4500 BtuH air conditioner (480 VAC, 1 phase); sing door assembly 48"Wx78"H; 1" isocyanurate foam core (R7); T equipment mounting panel on back wall; 10"x10" FRP gravity shutter with SS insect screen; Manufacturer's drawings and specifications shall be provided to Haley & Aldrich, Inc for approval before the building can be installed.

2. Concrete shall be per MAG SPECIFICATIONS 505, 725, & 726. Subgrade shall be prepared per MAG SPECIFICATION 301.

3. Safety posts shall be constructed to conform to MAG Specs Standard Detail No. 140. The above grade portion of the posts shall be primed and painted safety yellow.

REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	PROJ	LEAD
1	1/16/15	AS-BUILT	EV	NS	EV	TS
0	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS



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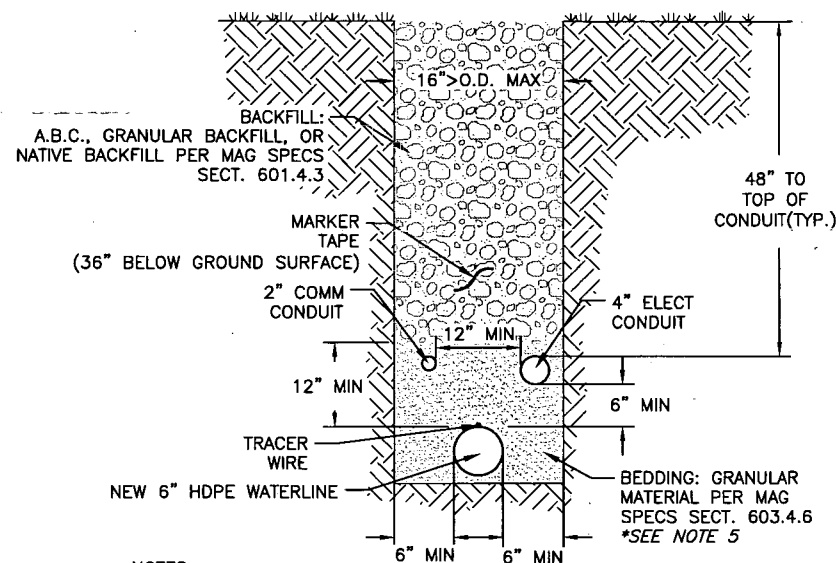
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GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

E-103 COMPOUND CONTROL  
PANEL BUILDING

PROJECT NO.	11124.005
CADD FILE	C-4 E-103 FIBERGLASS BUILDING
DESIGNED BY	EV
DATE	6/25/14
CHECKED BY	NS
DATE	6/25/14
DATE	6/25/14

C-4

SHEET 7 OF 19

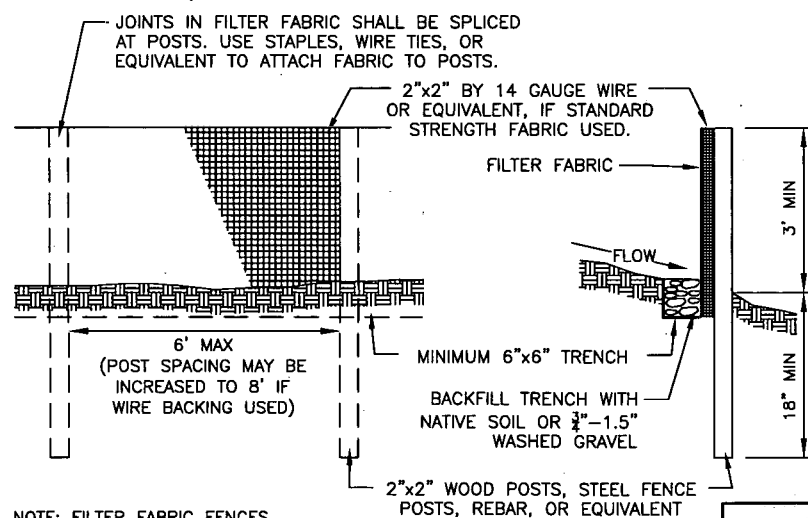


#### NOTES:

- TRENCH BACKFILL AND BEDDING SHALL BE COMPACTED BY MECHANICAL MEANS ONLY. BACKFILL AND BEDDING SHALL BE PLACED IN LIFTS THE HEIGHT OF WHICH SHALL NOT EXCEED THAT WHICH CAN BE EFFECTIVELY COMPACTED DEPENDING ON THE TYPE OF MATERIAL, AND TYPE OF EQUIPMENT AND METHODS USED. THE FIRST LIFT SHALL BE 8 INCHES OR TWO-THIRDS OF THE DISTANCE TO THE SPRINGLINE WHICHEVER IS GREATER. SUCCEEDING LIFTS SHALL NOT EXCEED 1 FOOT LOOSE AND EXTREME CARE WILL BE TAKEN TO PREVENT DAMAGE TO OR MOVEMENT OF THE CONDUIT BY THE COMPACTION EQUIPMENT. THE MOISTURE CONTENT SHALL BE SUCH THAT THE SPECIFIED COMPACTION CAN BE OBTAINED.
- MINIMUM TRENCH COMPACTION DENSITIES SHALL COMPLY WITH MAG SPECS SECT. 601.4.4 TABLE 601-2, TYPE II BACKFILL.
- MAINTAIN A MINIMUM OF 12 INCHES OF SEPARATION FROM THE O.D. OF THE ELECTRICAL AND COMMUNICATION CONDUITS
- MAINTAIN A MINIMUM OF 6 INCHES OF VERTICAL CLEARANCE BETWEEN THE WATERLINE AND CONDUITS.
- BEDDING AND FOUNDATION TO MEET OR EXCEED HDPE MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR TO PROVIDE OPTIONAL INCREMENTAL PRICING FOR 1/2 SACK CLSM FROM 30 TO 48 INCHES BELOW GROUND SURFACE.

#### E-103 6" HDPE PIPE DETAIL

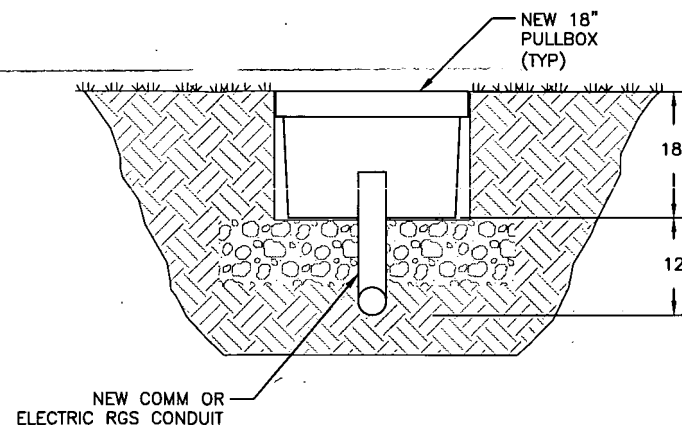
Scale: N.T.S.



NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

#### SILT FENCE DETAIL

Scale: N.T.S.

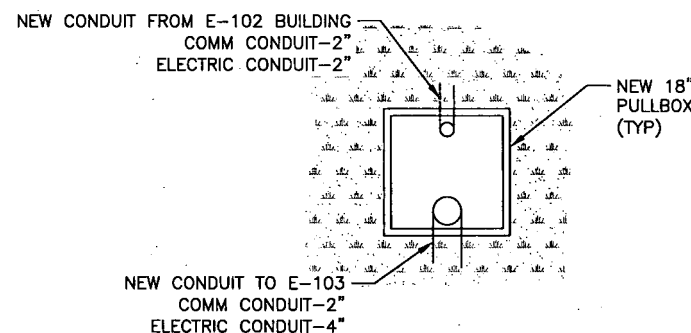


#### INSTALLATION NOTES:

- PULLBOXES SHALL BE QUAZITE PG1324BA18 BOX AND PG1324CA0009 COVER OR EQUAL.
- TURN-UPS INTO PULLBOXES SHALL BE LONG SWEEP RGS ELBOWS.

#### NEW PULLBOX SECTION-TYPICAL

Scale: N.T.S.

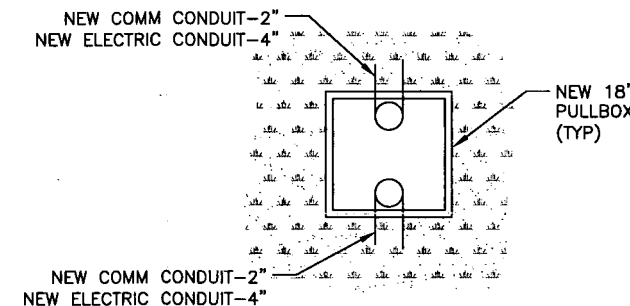


#### INSTALLATION NOTES:

- RUN 2" COMMUNICATION CONDUIT AND 2" ELECTRICAL CONDUIT FROM EXISTING E-102 COMPOUND TO (2) NEW PULLBOXES ([1] COMM PULLBOX; [1] ELECTRICAL PULLBOX).
- MATE WITH 2" COMMUNICATION CONDUIT AND 4" ELECTRICAL CONDUIT TO NEW E-103 COMPOUND
- SUPPLY AND PULL TWO (2) EACH BELDEN #9842 CABLE OR ENGINEER APPROVED EQUAL, LEAVING 6' OF COILED WIRE IN THE BOX.

#### NEW PULLBOXES AT E-102 COMPOUND

Scale: N.T.S.

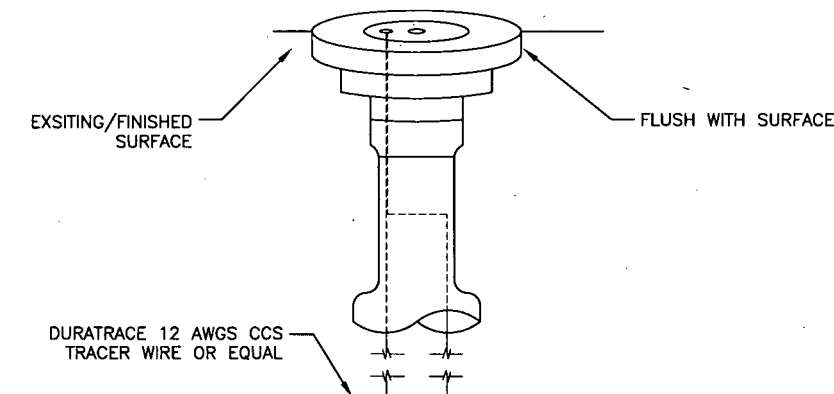


#### INSTALLATION NOTES:

- STA. 4+35: RUN 2" COMMUNICATION CONDUIT AND 4" ELECTRICAL CONDUIT FROM NEW E-102 COMPOUND PULLBOXES TO (2) NEW PULLBOXES AT STA. 4+35 ([1] COMM PULLBOX; [1] ELECTRICAL PULLBOX).
- E-103 COMPOUND: RUN 2" COMMUNICATION CONDUIT AND 4" ELECTRICAL CONDUIT FROM STA. 4+35 PULLBOXES TO (2) NEW PULLBOXES AT E-103 COMPOUND ([1] COMM PULLBOX; [1] ELECTRICAL PULLBOX).
- MATE WITH 2" COMMUNICATION CONDUIT AND 4" ELECTRICAL CONDUIT TO NEW E-103 COMPOUND
- PULL TWO (2) EACH BELDEN #9842 CABLE OR ENGINEER APPROVED EQUAL, LEAVING 6' OF COILED WIRE IN THE BOX.

#### NEW PULLBOXES AT STA ~4+35 AND E-103 COMPOUND

Scale: N.T.S.

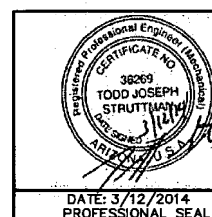


#### INSTALLATION NOTES:

- DETECTOR BOX LOCATED IN SAME VICINITY AS NEW PULLBOX AT STA 4+50
- SNAKEPIT MODEL CD14\*TP OR ENGINEER APPROVED EQUAL
- DURATRACE 12 AWG CCS TRACER WIRE TO FOLLOW PIPING

#### PIPELINE DETECTOR BOX

Scale: N.T.S.



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	PROJ	LEAD
4	1/16/15	AS-BUILT	EV	NS	EV	TS
3	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS
2	3/3/14	ISSUED FOR BID	TCW	NB	EV	TS
1	2/12/14	100% SITE DESIGN	TCW	NB	EV	TS
0	12/16/13	DESIGN REVIEW	TCW	NB	EV	TS

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www.lata.com

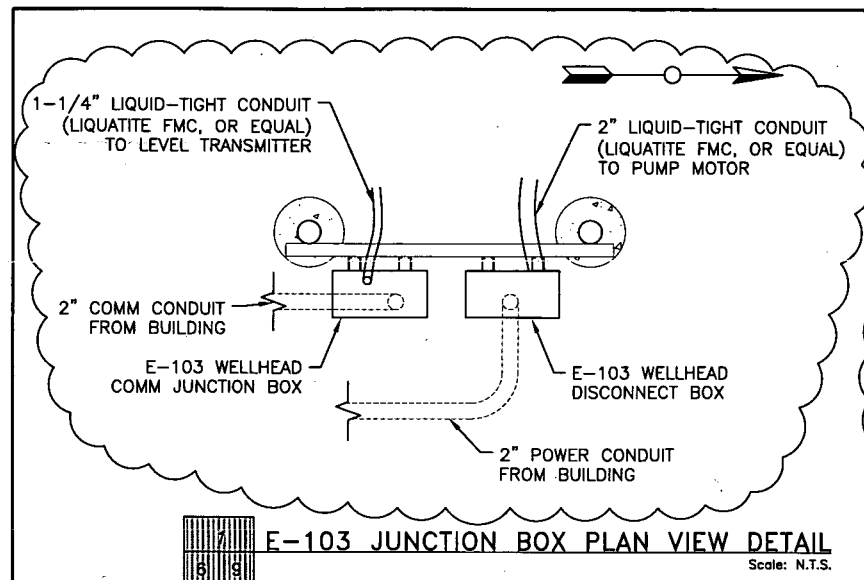
PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

#### E-103 PIPE AND CONDUIT DETAILS

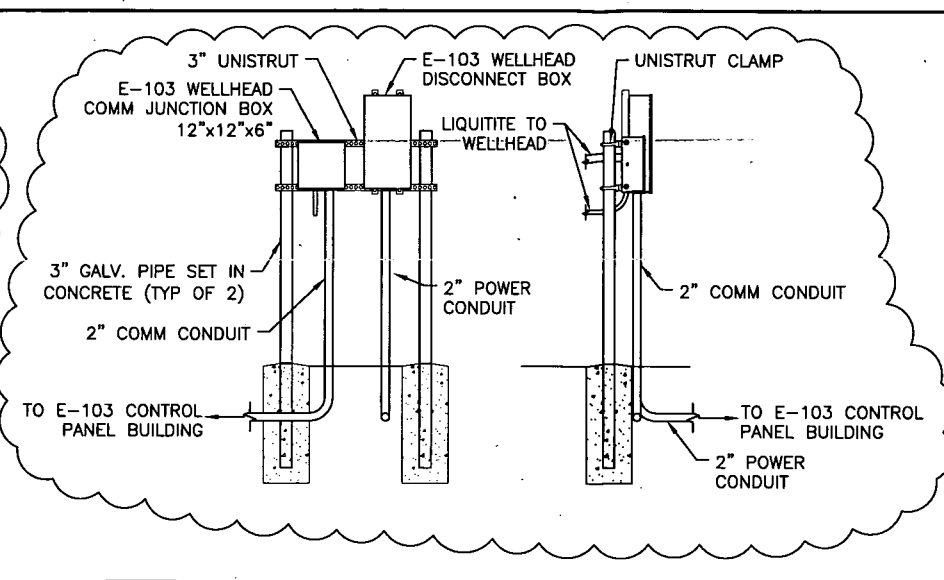
PROJECT NO.	11124.005
CADD FILE	C-5 E-103 PIPE AND CONDUIT DETAILS
DESIGNED BY	EV
CHECKED BY	TS
DATE	12/16/13
DATE	12/16/13
DATE	12/16/13
DATE	12/16/13

C-5

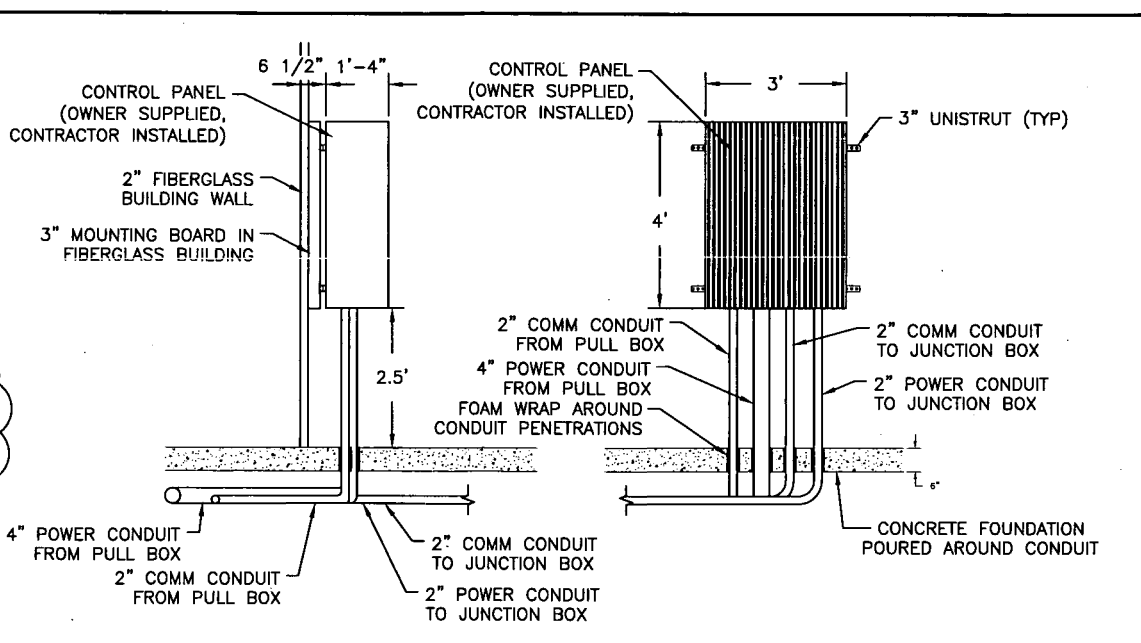
SHEET 8 OF 19



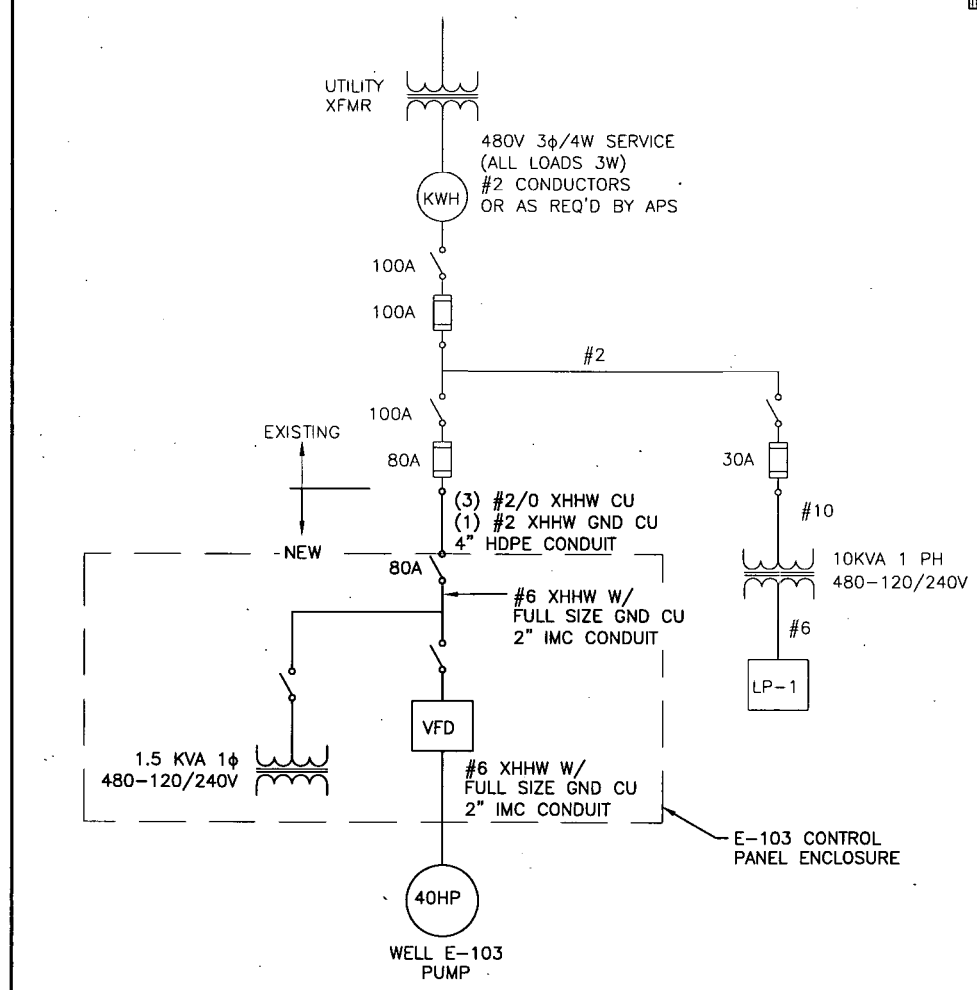
**E-103 JUNCTION BOX PLAN VIEW DETAIL**  
Scale: N.T.S.



**E-103 JUNCTION BOX PROFILE VIEW DETAIL**  
Scale: N.T.S.



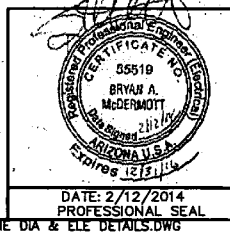
**E-103 CONTROL PANEL DETAILS**  
Scale: N.T.S.



**ONE LINE DIAGRAM**  
Scale: N.T.S.

INSTRUMENT	LOCATION	QTY	MAKE/MODEL NUMBER	NOTES
VARIABLE FREQUENCY DRIVE	E-103 40 HP	1	SUPPLIED BY OTHERS	INSTALLED IN OWNER SUPPLIED CONTROL PANEL. GENERAL CONTRACTOR SHALL INSTALL CONTROL PANEL.
VFD OUTPUT FILTER	E-103	1	SUPPLIED BY OTHERS	INSTALLED IN OWNER SUPPLIED CONTROL PANEL. GENERAL CONTRACTOR SHALL INSTALL CONTROL PANEL.
LEVEL TRANSMITTER	E-103 WELL	1	INSITU PXD-261 50 PSI RANGE WITH CABLES. CABLE LENGTH 250'	ENGINEER APPROVED EQUAL IS ACCEPTABLE
EXTRACTION WELL PUMP AND MOTOR	E-103 WELL	1	GRUNDFOS SUBMERSIBLE PUMP MODEL 475S400-4, 40 HP, 7-INCH DIAMETER	OWNER SUPPLIED. INSTALLED BY OTHERS.
PULLBOX	E-103 DISCHARGE LINE AND WELL COMPOUNDS	3	QUAZITE MODEL NUMBER PG1324BA18 AND COVER MODEL NUMBER PG1324CA0009	ENGINEER APPROVED EQUAL IS ACCEPTABLE
CONTROL WIRE	2" COMMUNICATION CONDUIT FROM E-102 TO E-103 WELL COMPOUND		BELDEN DH-485 CABLE MODEL #9842	ENGINEER APPROVED EQUAL IS ACCEPTABLE

**E-103 EQUIPMENT LIST**  
Scale: N.T.S.



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	CHK	ENGR	LEAD	ENGR
4	1/16/15	AS-BUILT						
3	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND						
2	3/3/14	ISSUED FOR BID (NO CHANGE FROM REV 1)						
1	2/12/14	100% SITE DESIGN						
0	12/16/13	DESIGN REVIEW						

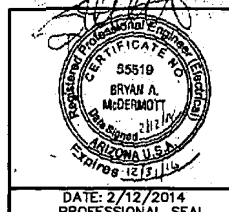
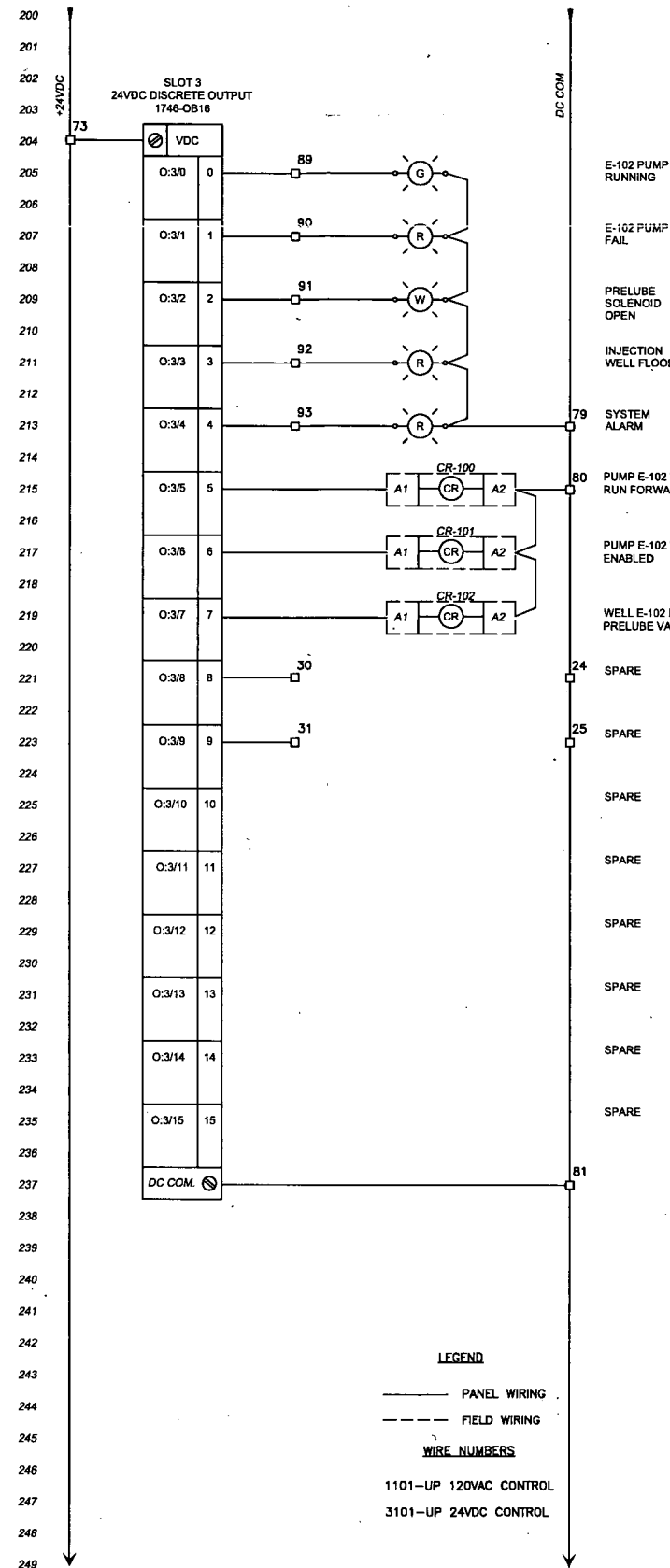
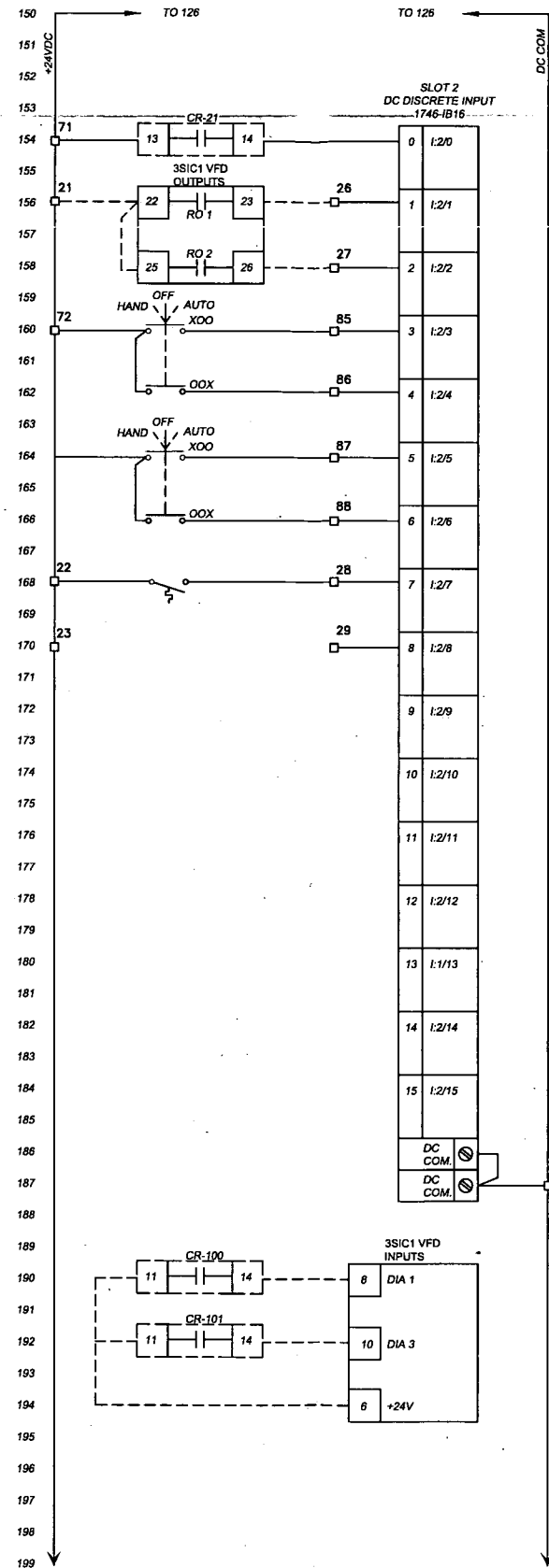
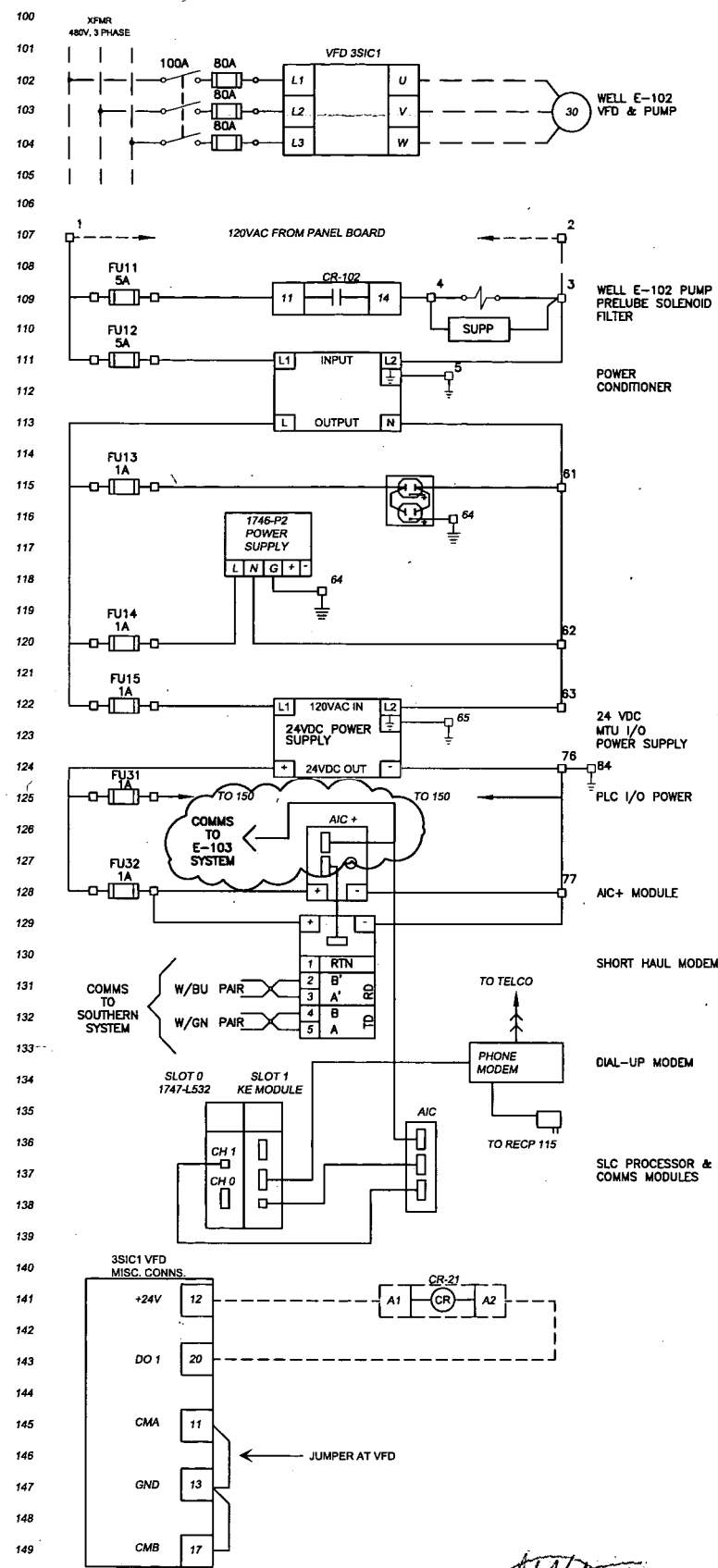
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Westerville, OH 43081

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GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

**ONE LINE DIAGRAM AND ELECTRICAL DETAILS**

PROJECT NO: 11124.005  
CADD FILE: E-1 ONE LINE DIA & ELE DETAILS  
DESIGNED BY: TH DATE: 12/16/13  
DRAWN BY: NB DATE: 12/16/13  
CHECKED BY: TS DATE: 12/16/13

**E-1**  
SHEET 9 OF 19



REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	DATE
4	1/16/15	AS-BUILT	EV	NS	EV
3	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV
2	3/3/14	ISSUED FOR BID (NO CHANGE FROM REV 1)	NB	TCW	EV
1	2/12/14	100% SITE DESIGN	NB	TCW	EV
0	12/16/13	DESIGN REVIEW	NB	TCW	EV

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www.lta.com

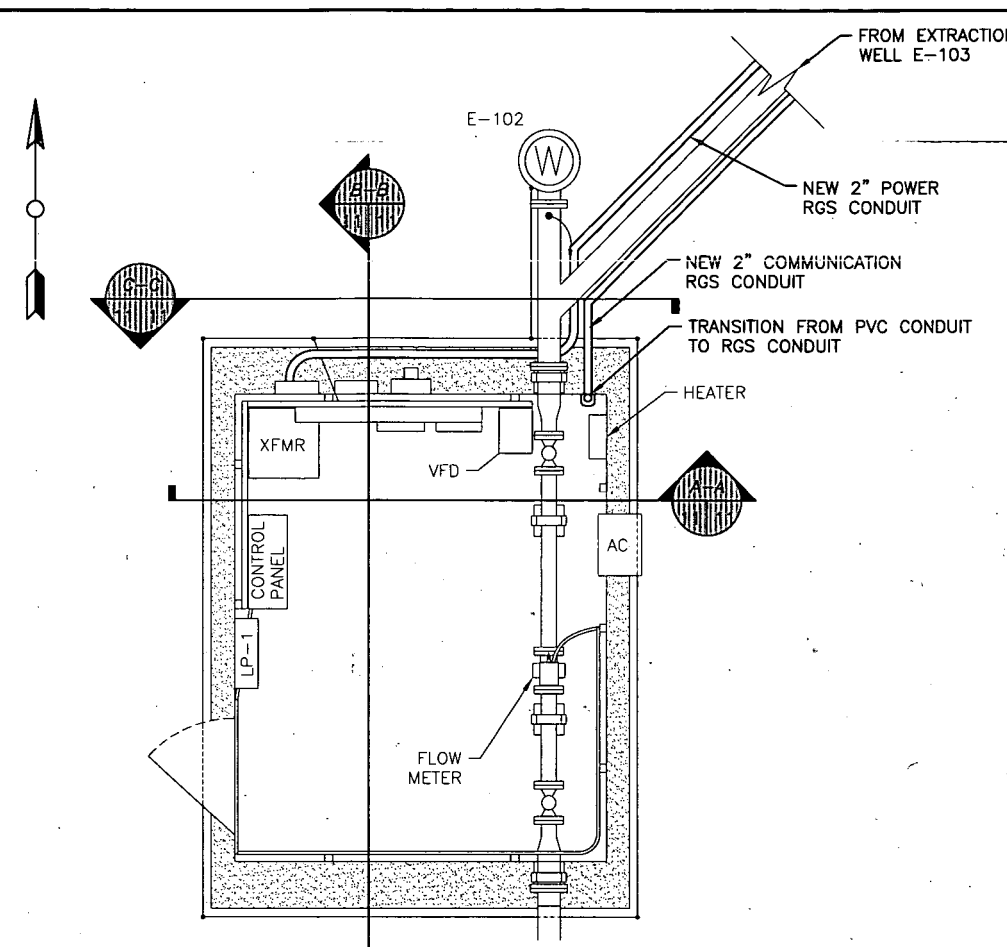
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756 Park Meadow Road  
Westerville, OH 43081

PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

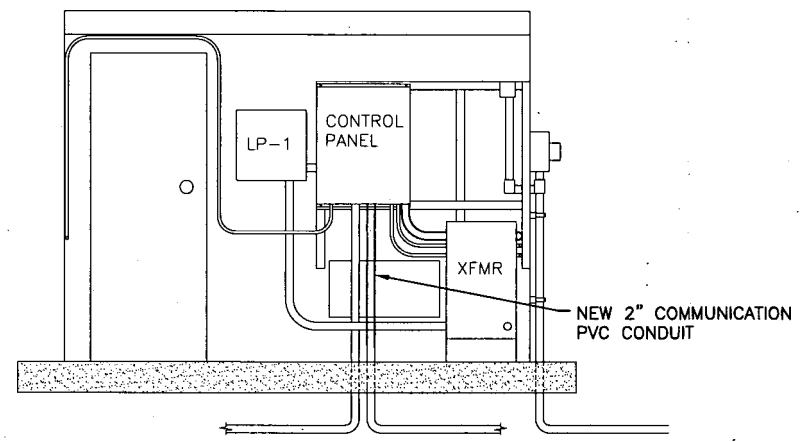
**E-102 ELECTRICAL SCHEMATIC**

PROJECT NO:	11124.005
CADD DWG FILE:	E-2 ELECTRICAL SCHEMATIC
DESIGNED BY:	TH
DRAWN BY:	NB
CHECKED BY:	EV
DATE:	12/16/13
DATE:	12/16/13
DATE:	12/16/13

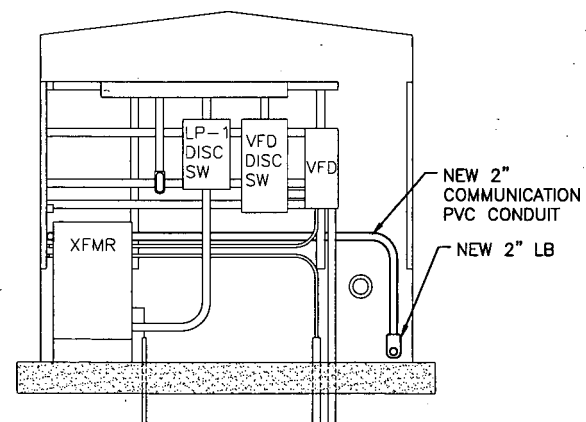
**E-2**  
SHEET 10 OF 19



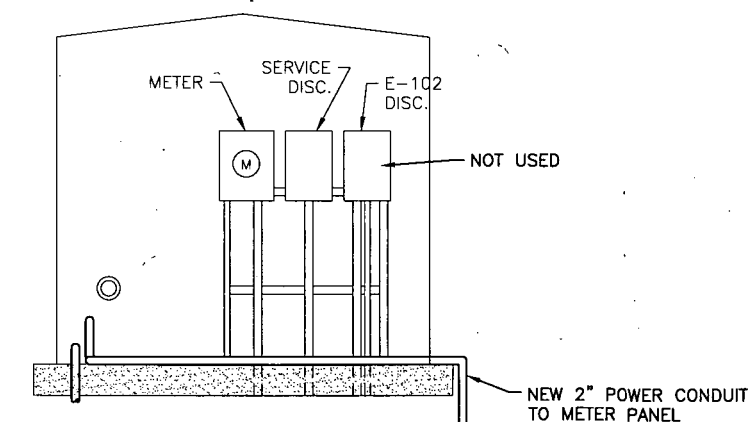
**E-102 PLAN VIEW**  
Scale: N.T.S.



**SECTION B-B**  
Scale: N.T.S.

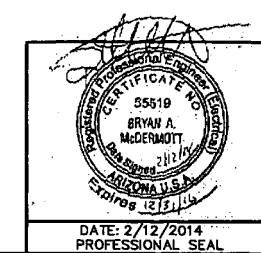


**SECTION A-A**  
Scale: N.T.S.



**SECTION C-C**  
Scale: N.T.S.

- NOTES:
1. ALL BUILDING PENETRATIONS SHALL BE SEALED WITH WEATHER TIGHT SEAL.
  2. CONTRACTOR SHALL REMOVE ELECTRICAL WIRES FROM E-102 DISCONNECT TO E-102 WELL VFD (3C-#2 WITH GROUND).



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT CHK	PROJ ENGR	LEAD ENGR
4	1/16/15	AS-BUILT	EV	NS	EV	TS
3	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	NS	EV	EV	TS
2	3/3/14	ISSUED FOR BID (NO CHANGE FROM REV 1)	NB	TCW	EV	TS
1	2/12/14	100% SITE DESIGN	NB	TCW	EV	TS
0	12/16/13	DESIGN REVIEW	NB	TCW	EV	TS

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PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

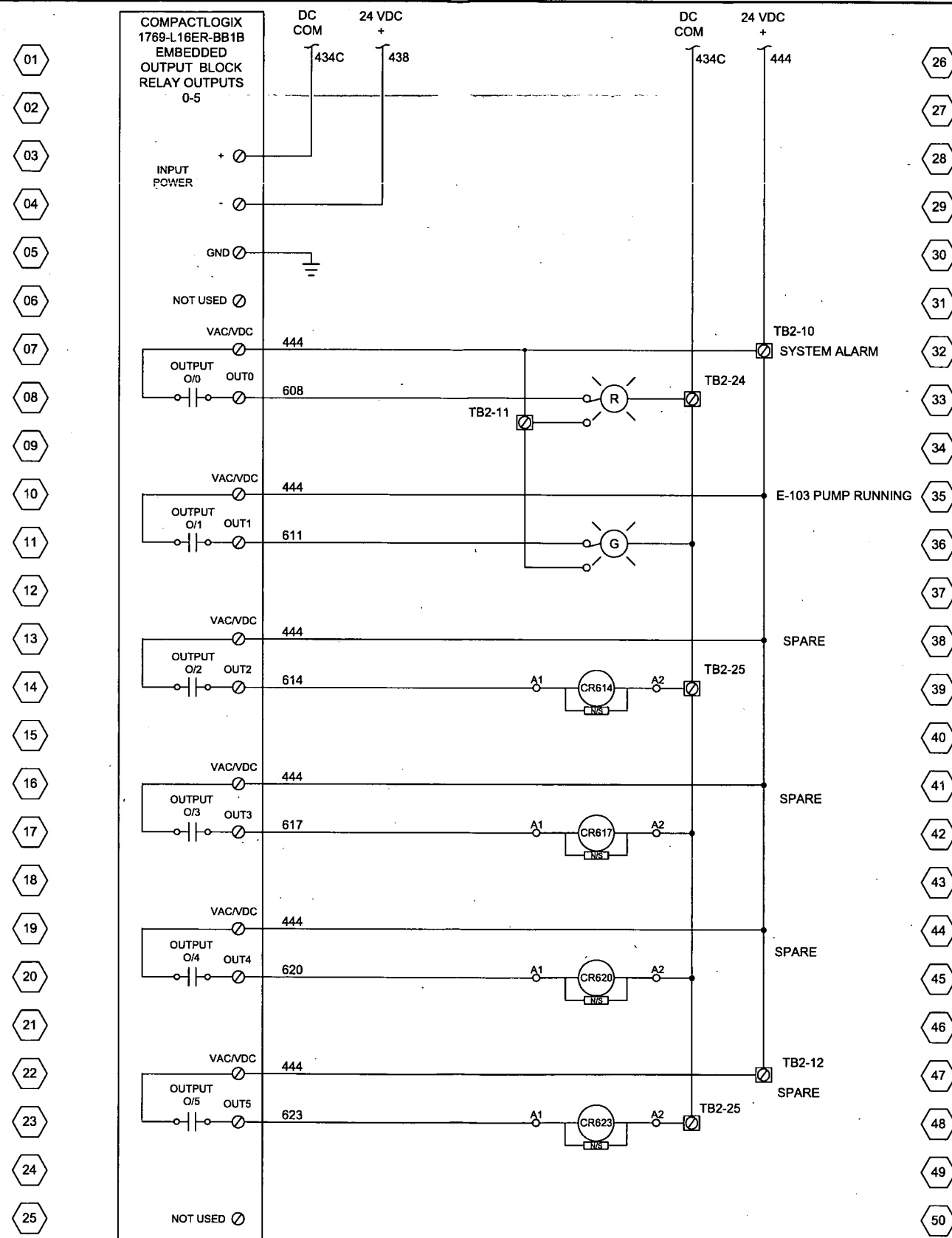
**ELECTRICAL TIE-IN DETAILS-  
VFD AND CONTROL BOX**

PROJECT NO:	11124.005
CADD DWG FILE:	E-3 ELECTRICAL TIE-IN DETAILS
DESIGNED BY:	TL
DRAWN BY:	NB
CHECKED BY:	TS
DATE:	12/16/13
DATE:	12/16/13
DATE:	12/16/13
<b>E-3</b>	
SHEET 11 OF 19	









	1	1/16/15	AS-BUILT	EV	NS	EV	TS	
DATE: PROFESSIONAL SEAL	0	7/3/14	ADDED FIBERGLASS BUILDING TO E-103 COMPOUND	TL	TH	TH	SM	
	REV	DATE	DESCRIPTION	DRAWN	DRAFT	PROJ	LEAD	



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756 Park Meadow Road  
Westerville, OH 43081

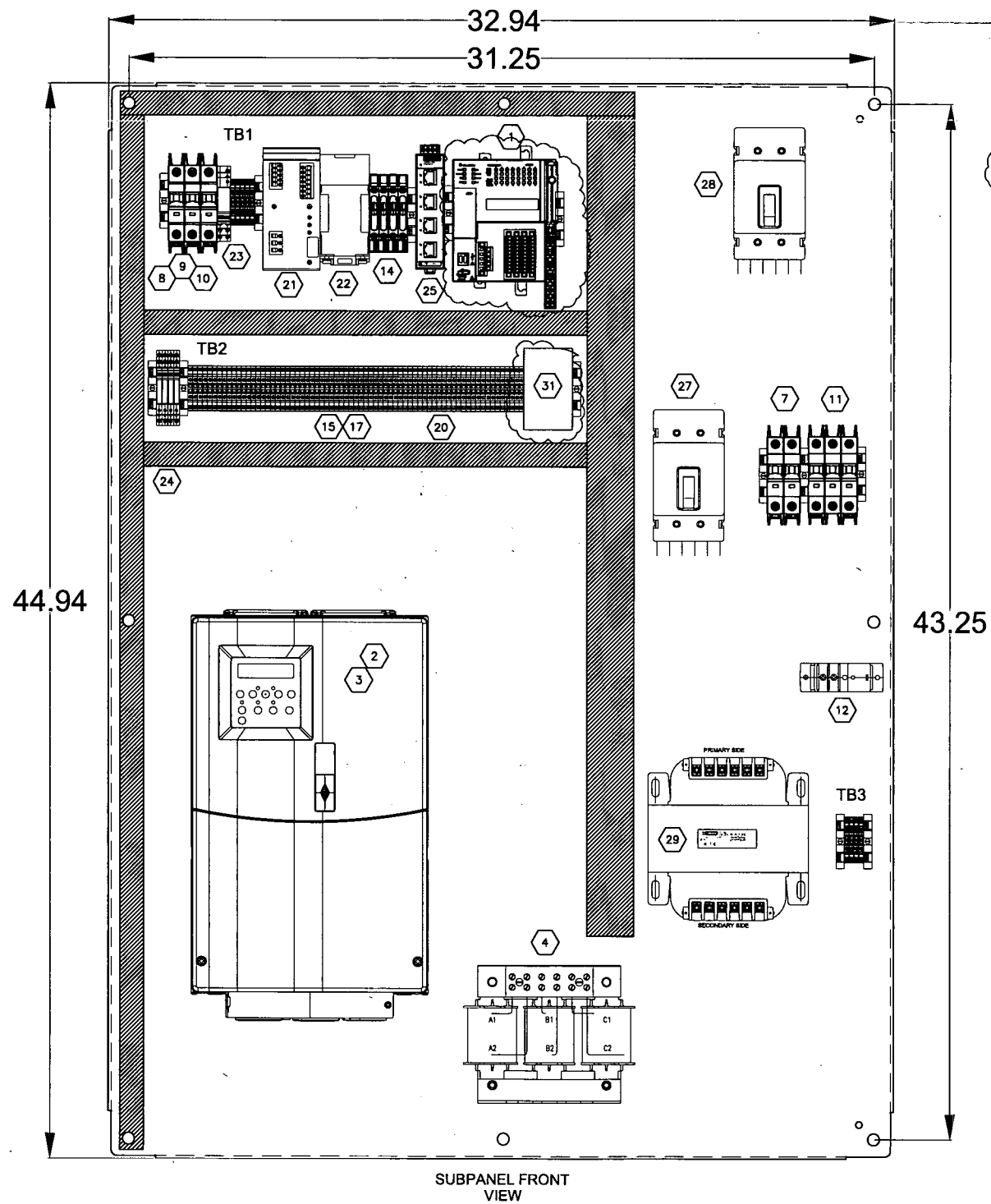
PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
E-103 WELL AND PIPELINE

## PLC DISCRETE OUTPUTS

PROJECT NO.: 11124.005	
CADD DWG FILE: E-8 PLC DO	
DESIGNED BY: TLL	DATE: 5/30/14
DRAWN BY: TLL	DATE: 5/14/30
CHECKED BY: TS	DATE: 12/16/13

E-6

SHEET 14 OF 19



Item #	QTY	DESCRIPTION	PART NUMBER	MANUFACTURER
PLC EQUIPMENT				
1	1	PLC Processor	1769-L16ER-BB1B W/ 1734-IE2V AND 1734-TB	ALLEN-BRADLEY
2	1	VFD		
2	1	PowerFlex 400	22C-D060A103	ALLEN-BRADLEY
3	1	Comms Module	22-COMM-E	ALLEN-BRADLEY
4	1	Reactor	LR-4040	Automation Direct
SENSORS, ENCODER AND CABLES				
5	1	Level Transmitter 0-10V	700S1HB0Bxxx.xxxxxx.xxxCxxxA	KPSI
6	1	Temperature Transmitter	TMW83	VAISALA
INTERNAL ENCLOSURE AND ELECTRICAL COMPONENTS				
7	1	Circuit Breaker 2 pole 4A	WMZT2D04	Eaton
8	1	Circuit Breaker 1 pole 10A	WMZT1D10	Eaton
9	1	Circuit Breaker 1 pole 2A	WMZT1D02	Eaton
10	1	Circuit Breaker 1 pole 1A	WMZT1D01	Eaton
11	1	Circuit Breaker 3 pole 10A	WMZT3D10	Eaton
12	1	AcuAMP single-phase AC adjustable current switch	ACS200-AA-S	AcuAMP
13	2	Fuses (6)	MDL6-25	Automation Direct
14	4	Fuse Holder	XBUT6FBN	EATON
15	50	Terminal Block	XBUT25	EATON
16	0	Three Tier Terminal Block W/GND	XB3UKF25PE	EATON
17	2	End Cover for terminal Block	XBACUT25	EATON
18	1	Jumpers 10 Position	XBAFBS105	EATON
19	4	Ground Block	XBUT25PE	EATON
20	10	End Block	XBAES35C	EATON
21	1	Uninterruptible power supply with integrated power supply unit, 5A	TRIO-UPS/1AC/24DC/ 5 - 2866611	PHOENIX CONTACT
22	1	Battery, UPS, lead AGM, VRLA technology, 24 V DC, 1.3 Ah	MINI-BAT/24DC/1.3AH - 2866417	PHOENIX CONTACT
23	1	Input Relays, 120VAC coil, DPDT WITH FILTER	XRU2D120U	Eaton
24	4	Control Relays, 24VDC coil, single pole	XRU1D24	Eaton
25	1	Ethernet Switch	2891021	PHOENIX CONTACT
26	1	distribution block	3TA125E6K	Eaton
27	1	60A molded case circuit breaker	EGE3060FFG	Eaton
28	1	80A molded case circuit breaker	EGB3080AFG	Eaton
29	1	480 X 240 Transformer 1.5KVA	C1590K2A	Eaton
30	1	Wireway		
31	1	PHOENIX CONTACT ETHERNET RADIO	2900016	PHOENIX CONTACT
32	1	Misc. Hardware		
33	1	Backpanel	SCE-48P36	SAGINAW
34	1	Enclosure Light	SCE-LF18NO	SAGINAW

E-103 INTERNAL PANEL EQUIPMENT LIST (PROVIDED BY OTHERS)

DATE:

PROFESSIONAL SEAL

1

1/16/15

AS-BUILT

0

7/3/14

ADDED FIBERGLASS BUILDING TO E-103 COMPOUND

REV

DATE

DESCRIPTION

EV

NS

EV

TS

TL

TH

TH

BM

DRAWN BY

DRAFT CHK

PROJ ENGR

LEAD ENGR

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756 Park Meadow Road

Westerville, OH 43081

PHOENIX-GOODYEAR AIRPORT

GOODYEAR, ARIZONA

E-103 WELL AND PIPELINE

E-103 INTERNAL

PANEL LAYOUT

PROJECT NO:

11124.005

CADD DWG FILE:

E-103 INTERNAL PANEL LAYOUT

DESIGNED BY:

TL

DATE:

12/16/13

DRAWN BY:

NB

DATE:

12/16/13

CHECKED BY:

TS

DATE:

12/16/13

E-10

SHEET 18 OF 19



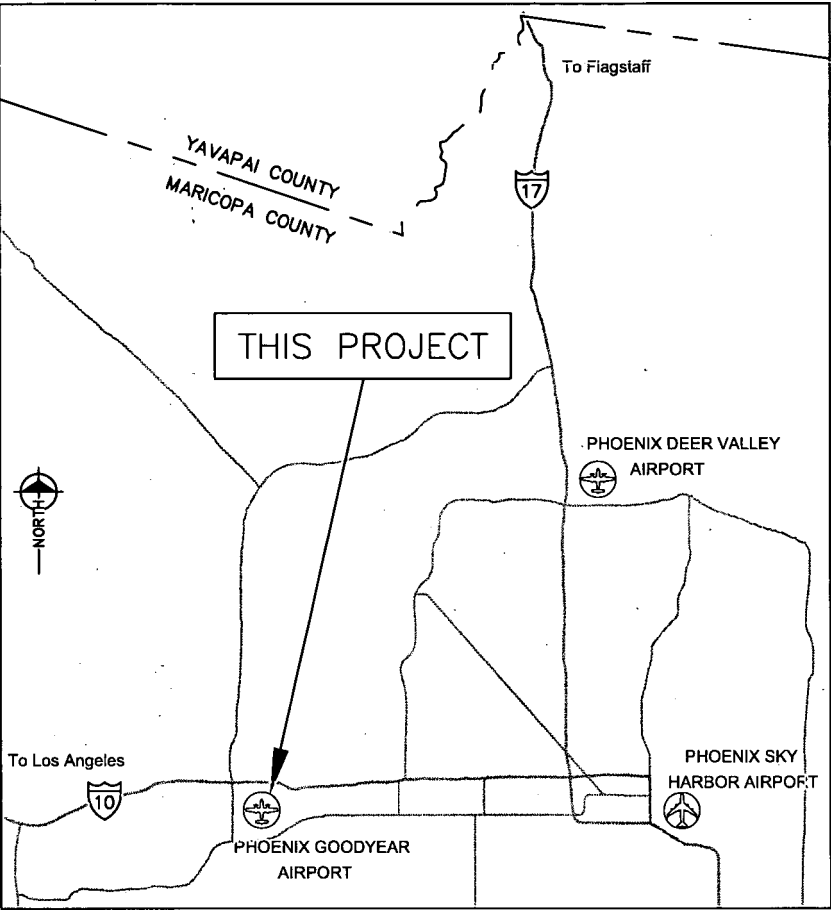
**Pipeline As-Built Drawings**



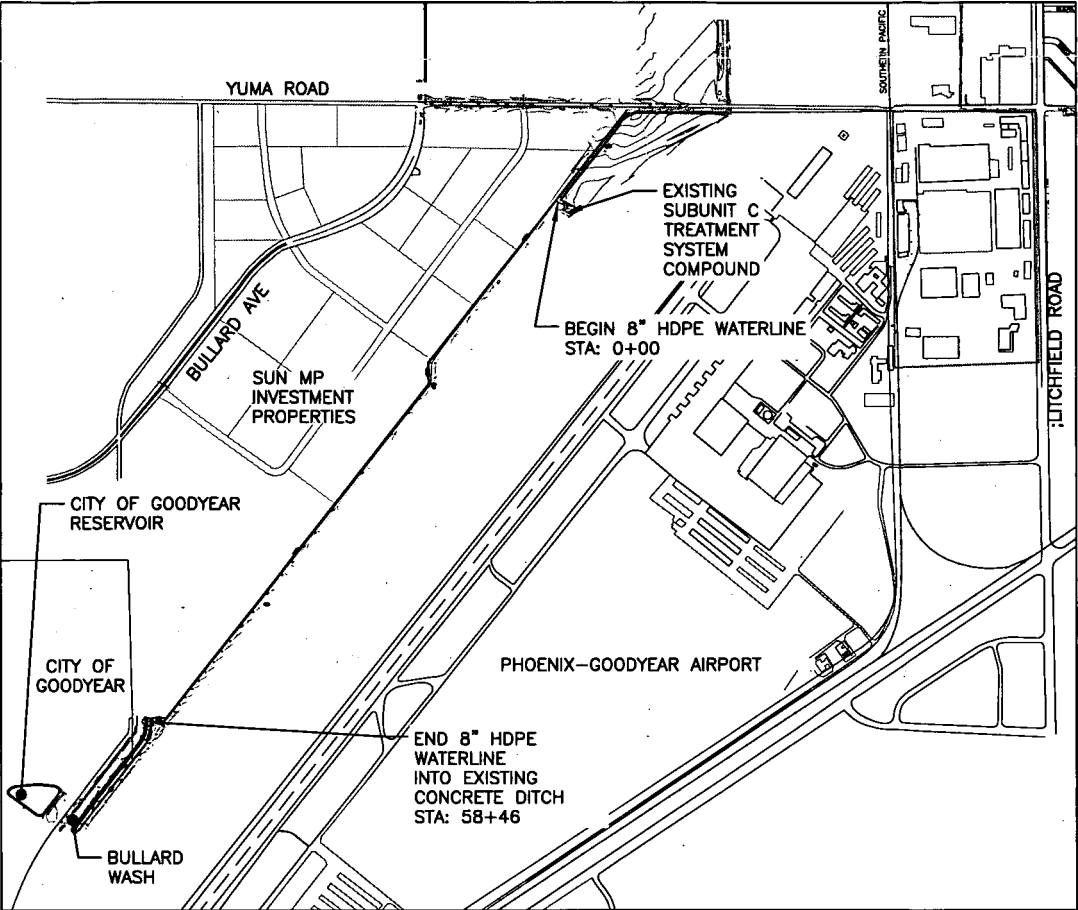
PHOENIX-GOODYEAR AIRPORT  
SOUTHERN SUBUNIT C WATER LINE INSTALLATION  
GOODYEAR, ARIZONA

**BLUE STAKE NOTE**  
ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100

**BENCHMARKS**  
BRASS CAP IN WEST HANDHOLE AT  
INTERSECTION OF YUMA ROAD AND  
LITCHFIELD ROAD.  
NORTHING (NAD83): 886208.62  
EASTING (NAD83): 565269.77  
ELEVATION (NAVD88): 964.42  
COTTON PICKER SPINDLE AT THE  
SECTION CORNER AT THE  
INTERSECTION OF BULLARD AVE.  
AND YUMA RD.  
NORTHING (NAD83): 886267.71  
EASTING (NAD83): 559998.78  
ELEVATION (NAVD88): 979.40



LOCATION MAP  
NOT TO SCALE



VICINITY MAP  
1" = 800'

**LEGAL DESCRIPTION FOR PROJECT SITE**  
TOWNSHIP 1 NORTH, RANGE 1 WEST, SECTIONS  
9, 16, & 17, MARICOPA COUNTY, ARIZONA

**UTILITIES**  
EXISTING INJECTION AND EXTRACTION WATER LINES  
OWNED BY GOODYEAR TIRE & RUBBER COMPANY

**OWNER/DEVELOPER**  
GOODYEAR TIRE & RUBBER COMPANY  
1144 EAST MARKET STREET  
AKRON, OHIO 44316  
(330) 796-0578

**ENGINEER**  
LOS ALAMOS TECHNICAL ASSOCIATES, INC.  
756 PARK MEADOW ROAD  
WESTERVILLE, OHIO 43081  
(614) 508-1200

DRAWING INDEX

DWG #	SHT #	DESCRIPTION
G-1	1	TITLE SHEET
G-2	2	GENERAL NOTES
G-3	3	PROCESS FLOW DIAGRAM
C-1	4	OVERALL SITE PLAN
C-2	5	WATERLINE PLAN AND PROFILE SHEET 1
C-3	6	WATERLINE PLAN AND PROFILE SHEET 2
C-4	7	WATERLINE PLAN AND PROFILE SHEET 3
C-5	8	WATERLINE PLAN AND PROFILE SHEET 4
C-6	9	WATERLINE PLAN AND PROFILE SHEET 5
C-7	10	PIPING AND CONNECTION DETAILS AT EXISTING SUBUNIT C COMPOUND
C-8	11	SECTION VIEWS AT EXISTING SUBUNIT C COMPOUND
C-9	12	VALVE VAULT DETAILS
C-10	13	STANDARD DETAILS
C-11	14	DISCHARGE LOCATION DETAILS

DWG #	SHT #	DESCRIPTION
E-1	15	PROCESS AND INSTRUMENTATION DIAGRAM
E-2	16	CONDUIT LAYOUT AT EXISTING SUBUNIT C COMPOUND
E-3	17	CONDUIT AND ELECTRICAL DETAILS LAYOUT
E-4	18	ELECTRICAL LAYOUT EXISTING SUBUNIT C BUILDING
E-5	19	ONE LINE DIAGRAM AND ELECTRICAL DETAILS
E-6	20	ELECTRICAL SCHEMATIC SHEET 1
E-7	21	ELECTRICAL SCHEMATIC SHEET 2
E-8	22	ELECTRICAL SCHEMATIC SHEET 3
E-9	23	ELECTRICAL SCHEMATIC SHEET 4

ESTIMATED QUANTITIES		
ITEM	QTY	UNIT
8" SDR 21 HDPE	5,890	LF
4" SDR 21 HDPE	30	LF
3" SDR 21 HDPE	5	LF
8" SCH 80 PVC	10	LF
4" SCH 80 PVC	10	LF
8" DI	40	LF

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "AS-BUILT"  
INFORMATION SHOWN HEREON WAS OBTAINED  
UNDER MY DIRECT SUPERVISION AND IS CORRECT  
AND COMPLETE TO THE BEST OF MY KNOWLEDGE  
AND BELIEF.

TODD JOSEPH STRUTTMANN 1/28/2015  
BY DATE



AS-BUILT HORIZONTAL CONTROL VERIFIED BY ARTHUR A. WITZELL, REGISTERED  
LAND SURVEYOR, 10/20/2014.  
INFINITY ENGINEERING SERVICES, INC.  
P.O. BOX 88034  
PHOENIX, AZ 85080  
(602) 318-5785



DATE: 10/10/2013  
PROFESSIONAL SEAL

REV	DATE	DESCRIPTION
6	01/22/15	AS-BUILT
5	10/01/13	ISSUED FOR BID
4	07/11/13	100% SITE DESIGN
3	06/18/13	ADDED DWG E-5 TO INDEX
2	06/07/13	90% SITE DESIGN
1	04/29/13	REVISIONS TO 60% SUBMITTAL
0	04/10/13	60% SITE DESIGN



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Westerville, OH 43081

PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

TITLE SHEET

PROJECT NO:	11168.005.04
CADD DWG FILE:	G-1 COVER SHEET
DESIGNED BY:	DATE: _____
DRAWN BY:	DATE: _____
CHECKED BY:	DATE: _____
G-1	
SHEET 01 OF 23	

CITY OF GOODYEAR GENERAL NOTES FOR CONSTRUCTION

- A. Contractor shall obtain all necessary permits prior to construction.
- B. All construction shall conform with the City EDS&PM, City Standard Details, and current MAG Uniform Standard Specifications and Details for Public Works Construction.
- C. This set of plans has been reviewed for compliance with the City requirements prior to issuance of construction permits. However, such review shall not prevent the City from requiring correction of errors in plans found to be in violation of any law or ordinance.
- D. The City does not warrant any quantities shown on these plans.
- E. The City approval is for general layout in the right-of-way only. This approval is valid for a period of one year. Construction permits shall be obtained during this period or the plans shall be resubmitted for review and approval.
- F. An approved set of plans shall be available on the job site at all times.
- G. The City shall be notified 48 hours prior to any construction work and inspections (623-882-7979). Construction work concealed without inspection by the City construction inspector shall be subject to exposure at the Contractor's expense.
- H. Any work performed without the approval of the City engineer, or designee, and any work/material not in conformance with City engineering standards is subject to removal and replacement at the Contractor's expense.
- I. Right-of-way improvements shall not be accepted until "As-Built" plans have been submitted and approved by the City. (See as-built requirements)
- J. The developer is responsible for the removal or relocation of all obstructions within the right-of-way prior to starting new construction.
- K. The developer is responsible for arranging the relocation and associated costs of all utilities. A utility relocation schedule shall be submitted prior to the issuance of permits.
- L. The developer is responsible for obtaining or dedicating all required rights-of-way and easements to the City prior to issuance of permits.
- M. The Contractor shall contact BLUE STAKE (602-263-1100) at least 48 hours prior to construction. The Contractor shall locate all conflicts prior to construction.
- N. The Contractor shall barricade construction sites at all times per the City of Phoenix Traffic Barricade Manual. If needed, a traffic control plan shall be submitted to the City for approval in advance of construction.
- O. Potable water is not available for construction use other than the filling and testing of new lines. The unlawful removal of water from a fire hydrant or any other source is a violation of the municipal code, punishable by fine and/or imprisonment.
- P. Prior to moving or destroying protected native plant species, the Contractor shall file a formal Notice of Intent with the Arizona Department of Agriculture (602-542-6408).
- Q. The Contractor shall comply with the Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) storm water requirements established for construction sites, ADEQ General Permit for discharge from construction activities, and the City of Goodyear Storm Water Management Plan.
- R. No person shall use any mechanical equipment for land leveling or clearing, road construction, trenching, excavating, demolition, nor engage in any earthmoving activity without first obtaining a permit from the Maricopa County Air Quality Department (602-506-0666), 1001 N. Central Avenue, Suite 150, Phoenix, AZ 85003. (This notice is issued pursuant to A.R.S. 36-779.07, Notice of Building Agencies.)
- S. These plans reflect conditions as they exist at the time of design. If existing conditions have changed by the time of construction the Contractor shall notify the City and these plans may have to be amended prior to proceeding with construction activities.







GENERAL ABBREVIATIONS

ABC	AGGREGATE BASE COURSE	LBS	POUNDS
A.C.	ASPHALT-CONCRETE	INJ.	INJECTION
AC	ALTERNATING CURRENT	I/O	INPUT/OUTPUT
APPROX	APPROXIMATELY	LIT	LEVEL INDICATING TRANSMITTER
APS	AMERICAN POWER STANDARD	MA	MILLIAMPS
AWG	AMERICAN WIRE GAUGE	MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
BV	BUTTERFLY VALVE	MJ	MECHANICAL JOINT
COG	CITY OF GOODYEAR	NTS	NOT TO SCALE
CONC.	CONCRETE	PLC	PROGRAMMABLE LOGIC CONTROLLER
C.S.	CARBON STEEL	PSI	POUNDS PER SQUARE INCH
CV	CHECK VALVE	PSV	PRESSURE SUSTAINING VALVE
DEG	DEGREES	PVC	POLYVINYL CHLORIDE
DC	DIRECT CURRENT	RED.	REDUCING
DI	DUCTILE IRON	RGS	RIGID GALVANIZED STEEL
DISC.	DISCONNECT	SCH	SCHEDULE
DWG	DRAWING	SDR	STANDARD DIMENSION RATIO
EDS&PM	ENGINEERING DESIGN STANDARDS AND POLICIES MANUAL	SQ	SQUARE
ELEV	ELEVATION	STA	STATION
EOP	EDGE OF PAVEMENT	TYP	TYPICAL
FIT	FLOW INDICATING TRANSMITTER	THWN	MOISTURE & HEAT RESISTANT THERMOPLASTIC
FLG	FLANGED	TWSP	TWISTED WIRE SHIELDED PAIR
FLJ	FLANGE JOINT	UV	ULTRAVIOLET
FT	FEET	V	VOLT
GAC	GRANULAR ACTIVATED CARBON	VFD	VARIABLE FREQUENCY DRIVE
GND	GROUND	W	WATTS
GTRC	THE GOODYEAR TIRE AND RUBBER COMPANY	XFMR	TRANSFORMER
GV	GATE VALVE	XHHW	MOISTURE RESISTANT THERMOSET
HDPE	HIGH-DENSITY POLYETHYLENE		
HZ	HERTZ		

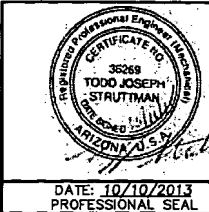
PROJECT SPECIFIC NOTES

- A. In addition to note B of City of Goodyear General Notes for Construction, all construction shall conform with the Technical Specifications and this plan set. In the event that there is a conflict, the Technical Specifications take precedence.
- B. In contrast to note J of City of Goodyear General Notes for Construction, the Contractor is responsible for the removal or relocation of all obstructions within the right-of-way prior to starting construction.
- C. In contrast to note K of City of Goodyear General Notes for Construction, the Contractor is responsible for arranging the relocation and associated costs of all utilities. A utility relocation schedule shall be submitted prior to the issuance of permits.
- D. In contrast to note L of the City of Goodyear General Notes for Construction, the Contractor is responsible for obtaining or dedicating all required rights-of-way and easements to the City prior to issuance of permits.
- E. The information presented in this plan set has been submitted to the City of Phoenix for review and approval via the Tenant Improvement Process. Additionally, GTRC has been granted access to conduct this work through the November 7, 1991 Access Agreement between the City of Phoenix and GTRC.
- F. The Contractor is responsible for following and operating within the guidelines set forth by OSHA, the USEPA, and any other regulatory agency or political entity having jurisdiction over the project. This includes the procurement of any and all applicable permits, bonds, or other assurances required by local, state, or federal agencies.
- G. The Contractor shall conduct his work activity in such manner as to minimize the release of any existing materials (waste or otherwise) to the environment.
- H. The Contractor is required to supply and install any erosion and sediment control measures as required by law or as directed by the project owner.
- I. The Contractor shall comply with basic provisions of OSHA Health and Safety Standards 29 CFR 1910 and General Construction Standards (29 CFR 1926) as appropriate to this construction.
- J. Areas denoted on the Plan set as "work by others" are not included in this scope of work.
- K. Construction permits shall be acquired by the Contractor.
- L. The Contractor shall conduct work activities during allowable construction work hours allowed by the Phoenix-Goodyear Airport.
- M. The owner's on-site engineer shall inspect and approve the lines before backfilling.

GENERAL SYMBOLS

----	PROPERTY BOUNDARY
—+—+—+—	FENCE
—•—•—•—	TOPOGRAPHIC CONTOUR
	CONCRETE
	UNDISTURBED EARTH
	RIP-RAP/GRAVEL
	PIPE FOUNDATION
	PIPE BEDDING
	BACKFILL

A: DETAIL NUMBER  
B: DRAWING NUMBER OF DETAIL CALL OUT  
C: DRAWING NUMBER OF DETAIL



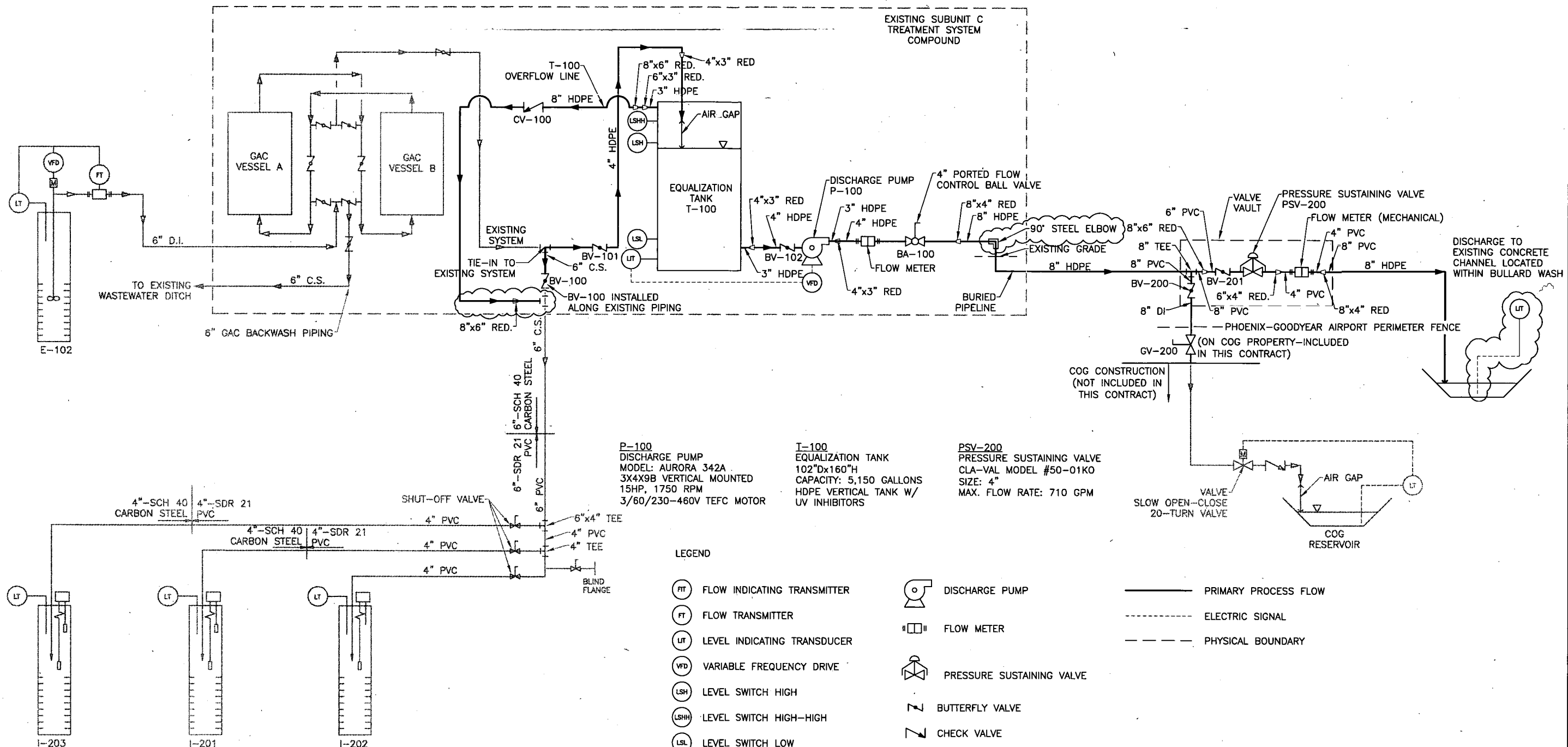
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2	06/07/2013	90% SITE DESIGN	ERV	BCK	ERV	TJS
1	04/28/2013	REVISIONS TO 60% SUBMITTAL	---	---	---	---
0	04/10/2013	60% SITE DESIGN	---	---	---	---
REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	PROJ	LEAD

**LATA** (614) 508-1200 (Phone)  
www.lata.com  
Los Alamos Technical Associates, Inc.  
756 Park Meadow Road  
Westerville, OH 43081

PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

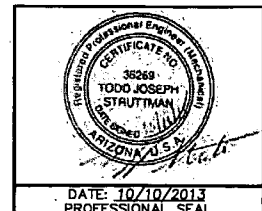
**GENERAL NOTES**

PROJECT NO:	11168.005.04
CADD DWG FILE:	G-2 GENERAL NOTES
DESIGNED BY:	DATE: ---
DRAWN BY:	DATE: ---
CHECKED BY:	DATE: ---
<b>G-2</b>	
SHEET 02 OF 23	



- LEGEND**
- (FIT) FLOW INDICATING TRANSMITTER
  - (FT) FLOW TRANSMITTER
  - (LT) LEVEL INDICATING TRANSDUCER
  - (VFD) VARIABLE FREQUENCY DRIVE
  - (LSH) LEVEL SWITCH HIGH
  - (LSHH) LEVEL SWITCH HIGH-HIGH
  - (LSL) LEVEL SWITCH LOW
  - (PUMP) DISCHARGE PUMP
  - (FM) FLOW METER
  - (PSV) PRESSURE SUSTAINING VALVE
  - (BV) BUTTERFLY VALVE
  - (CV) CHECK VALVE
  - (GV) GATE VALVE
  - (BV) BALL VALVE
  - PRIMARY PROCESS FLOW
  - ELECTRIC SIGNAL
  - PHYSICAL BOUNDARY

**BLUE STAKE NOTE**  
 ARIZONA BLUE STAKE NOTIFICATION  
 REQUIRED TWO FULL WORKING DAYS  
 PRIOR TO EXCAVATION  
 1-800-782-5348  
 IN MARICOPA COUNTY (602) 263-1100



REV	DATE	DESCRIPTION	BY	CHK	APP	ENG
6	01/22/15	AS-BUILT	ERV	NS	ERV	TJS
5	10/01/2013	ISSUED FOR BID	ERV	TJS	ERV	TJS
4	07/11/2013	100% SITE DESIGN	ERV	TJS	ERV	TJS
3	08/18/2013	REVISED OVERFLOW LINE SIZE	ERV	TJS	ERV	TJS
2	06/07/2013	90% SITE DESIGN	ERV	TJS	ERV	TJS
1	04/29/2013	REVISIONS TO 60% SUBMITTAL	---	---	---	---
0	04/10/2013	60% SITE DESIGN	---	---	---	---

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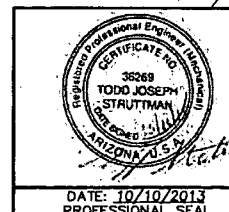
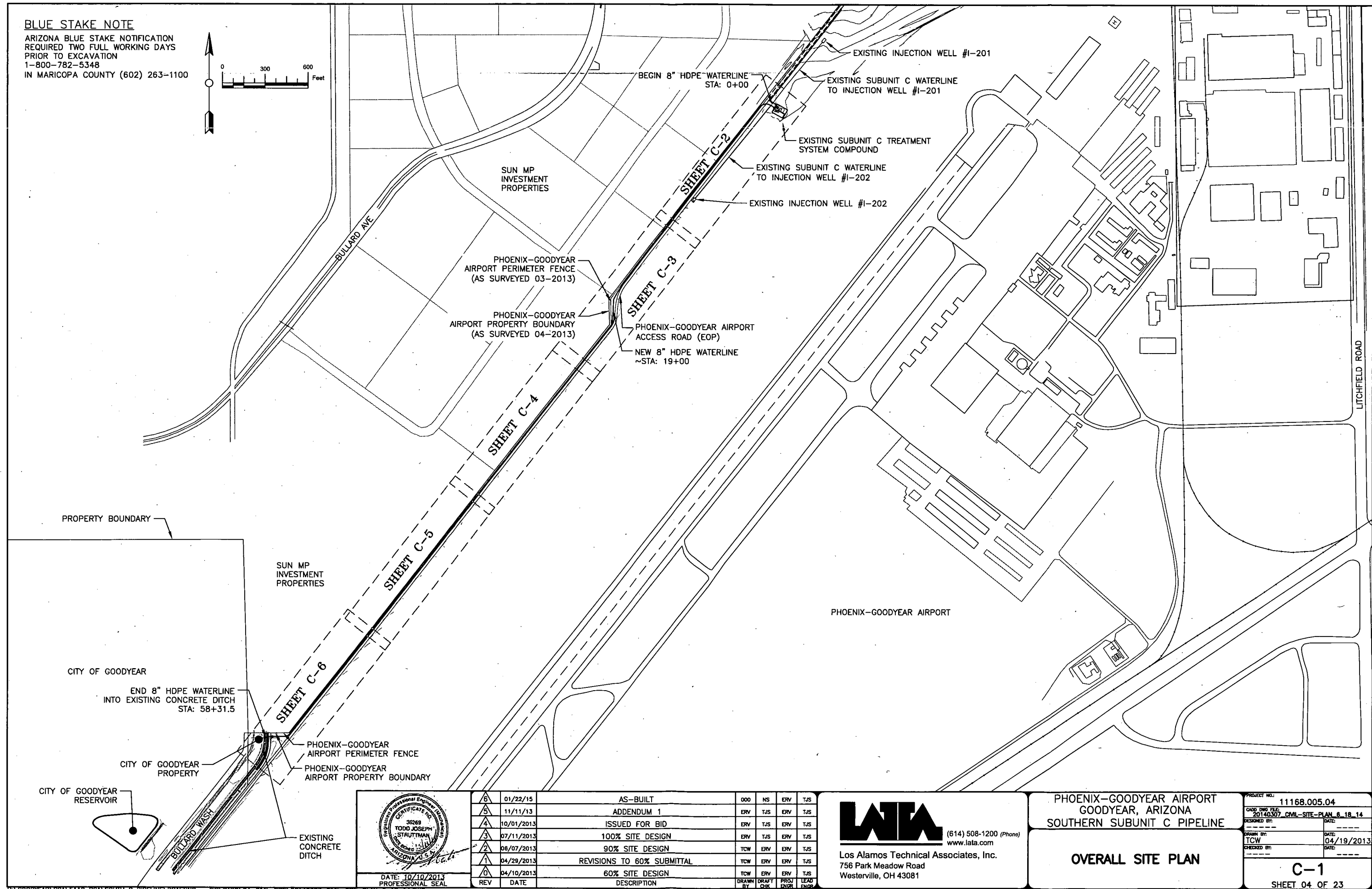
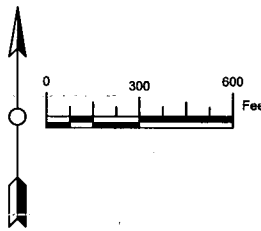
PHOENIX-GOODYEAR AIRPORT  
 GOODYEAR, ARIZONA  
 SOUTHERN SUBUNIT C PIPELINE

**PROCESS FLOW DIAGRAM**

PROJECT NO:	11168.005.04
CADD FILE:	G-3 PFD
DESIGNED BY:	DATE: ---
DRAWN BY:	DATE: ---
CHECKED BY:	DATE: ---
<b>G-3</b>	
SHEET 03 OF 23	



BLUE STAKE NOTE  
ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
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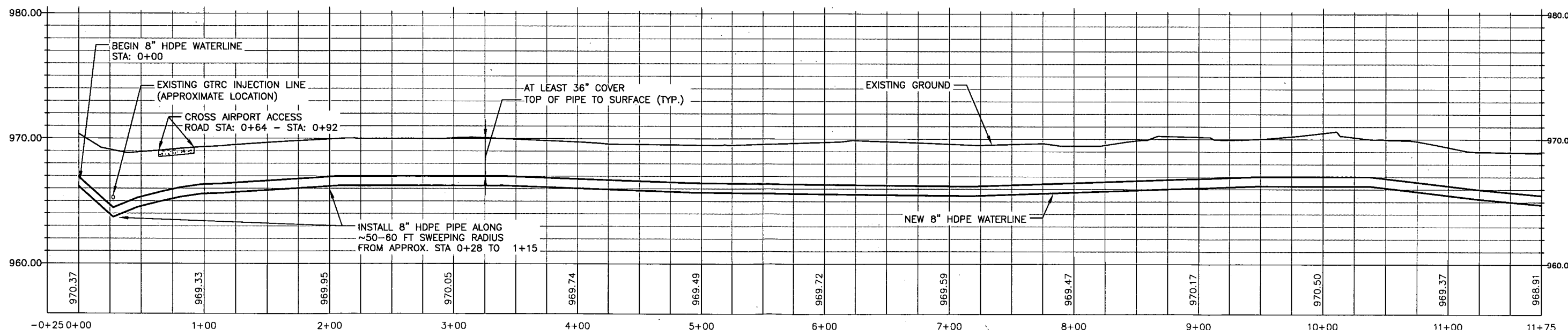
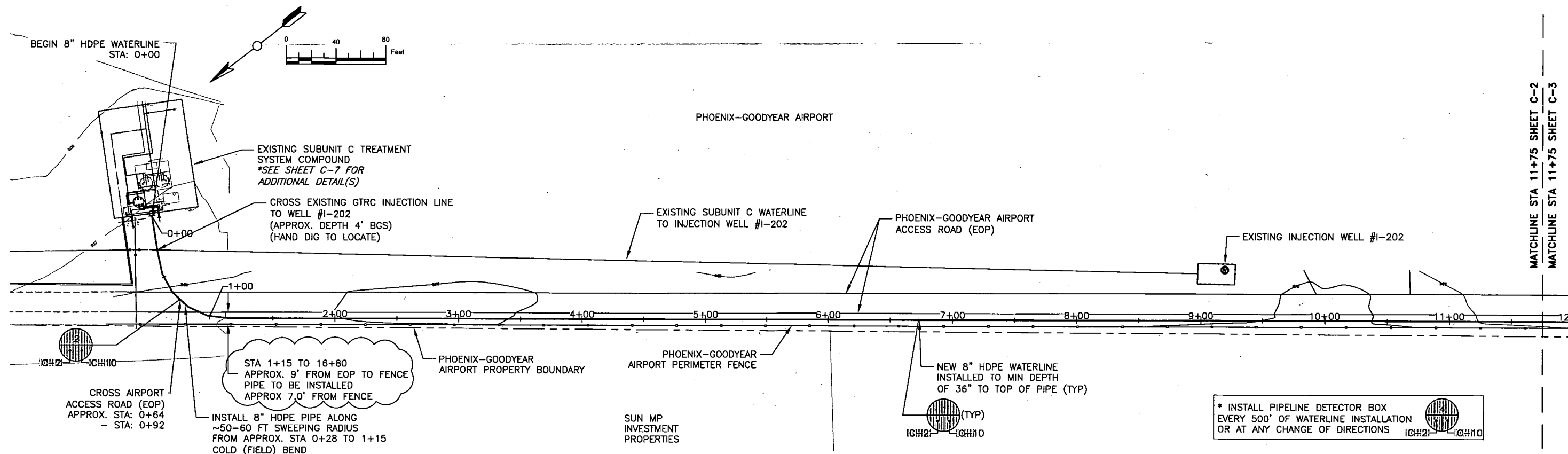
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1	04/29/2013	REVISIONS TO 60% SUBMITTAL	TCW	ERV	ERV	TJS
0	04/10/2013	60% SITE DESIGN	TCW	ERV	ERV	TJS
REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	CHK	ENG

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GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

**OVERALL SITE PLAN**

PROJECT NO: 11168.005.04  
CADD FILE: 20140307\_CML-SITE-PLAN\_6\_18\_14  
DESIGNED BY: TCW  
DATE: 04/19/2013  
CHECKED BY: TCW  
DATE: 04/19/2013  
C-1  
SHEET 04 OF 23

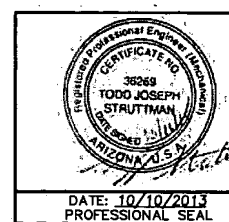
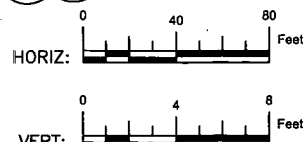


1 PIPE PROFILE  
SCALE: Horiz 1" = 40' - Vert 1" = 4'

AS-BUILT HORIZONTAL CONTROL VERIFIED BY ARTHUR A. WITZELL, REGISTERED LAND SURVEYOR, 10/20/2014

#### BLUE STAKE NOTE

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	CHK	ENGR	LEAD	ENGR
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1	04/29/2013	REVISIONS TO 60% SUBMITTAL	TCW	ERV	ERV	TJS		
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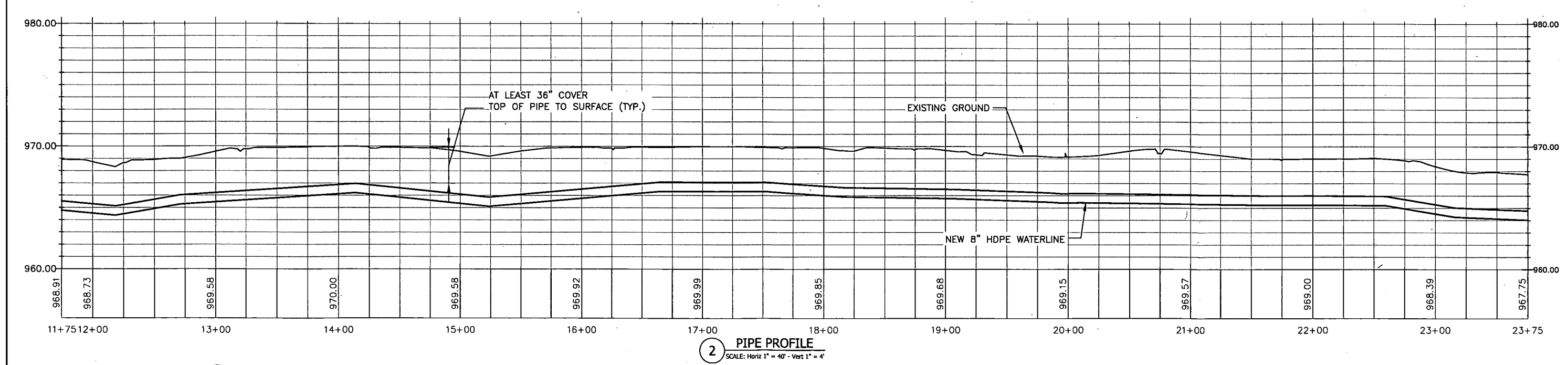
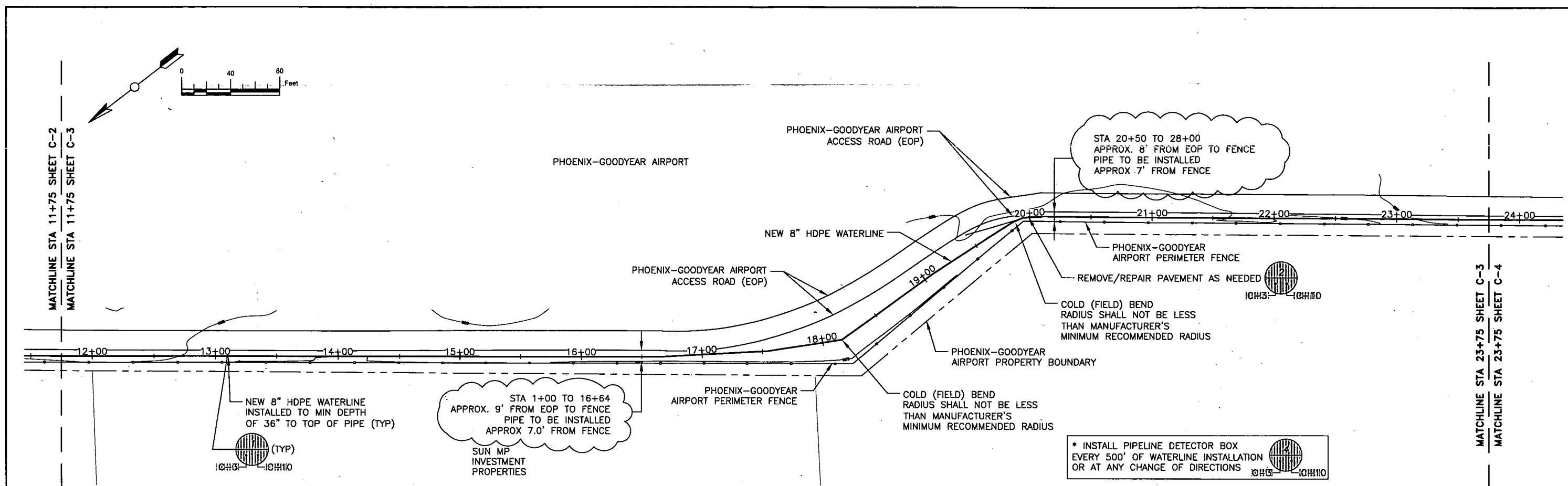
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GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

**NEW 8" HDPE WATERLINE  
PLAN & PROFILE SHEET 1**

PROJECT NO: 11168.005.04  
CADD FILE: 20140307\_CML-SITE-PLAN\_8\_18\_14  
DESIGNED BY: TCW  
CHECKED BY: ERV  
DATE: 04/19/2013

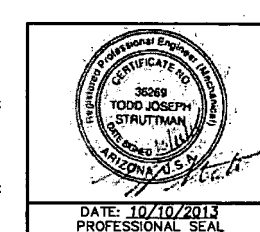
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SHEET 05 OF 23



AS-BUILT HORIZONTAL CONTROL VERIFIED BY ARTHUR A. WITZELL, REGISTERED LAND SURVEYOR, 10/20/2014

**BLUE STAKE NOTE**

ARIZONA BLUE STAKE NOTIFICATION REQUIRED TWO FULL WORKING DAYS PRIOR TO EXCAVATION 1-800-782-5348 IN MARICOPA COUNTY (602) 263-1100



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	CHK	ENGR	LEAD
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1	04/29/2013	REVISIONS TO 60% SUBMITTAL	TCW	ERV	ERV	TJS	
0	04/10/2013	60% SITE DESIGN	TCW	ERV	ERV	TJS	

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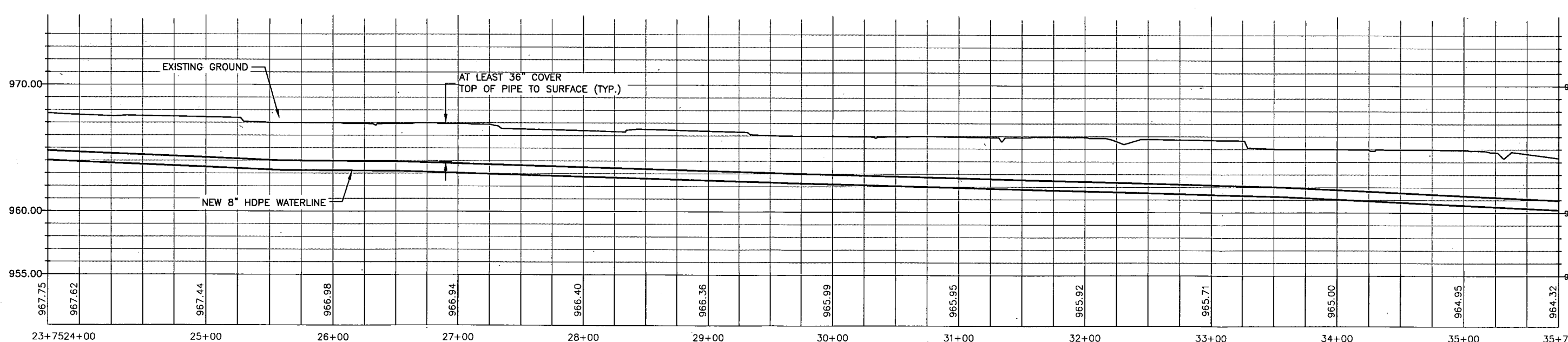
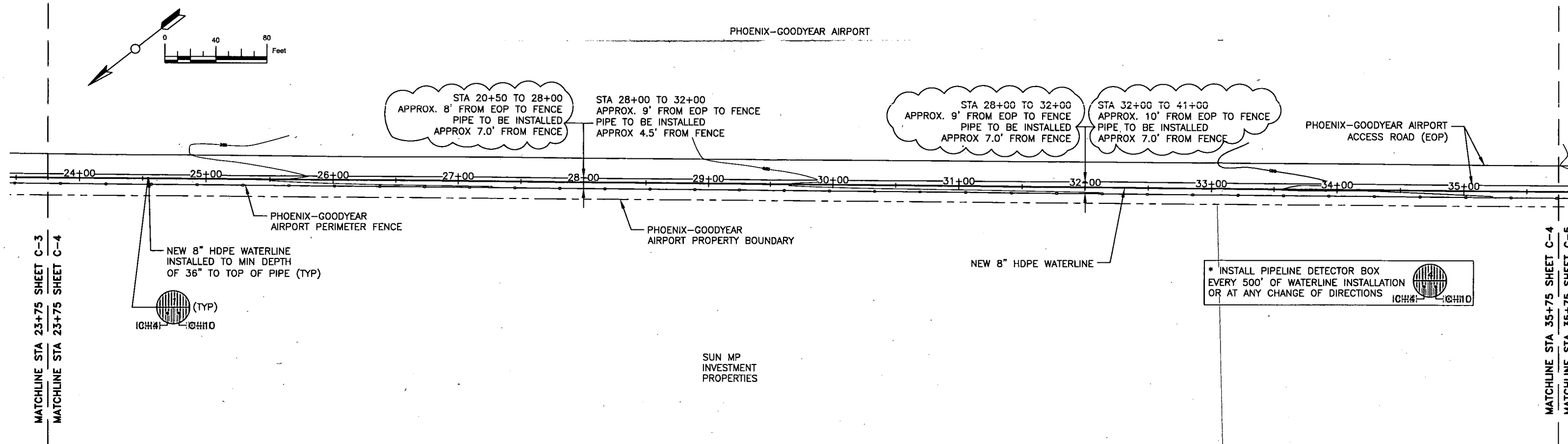
PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

**NEW 8" HDPE WATERLINE  
PLAN & PROFILE SHEET 2**

PROJECT NO.: 11168.005.04  
CADD FILE: 20140307\_CIVIL-SITE-PLAN\_6\_18\_14  
DESIGNED BY: TCW  
CHECKED BY: TCW  
DATE: 04/19/2013

**C-3**  
SHEET 06 OF 23

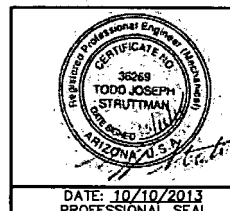
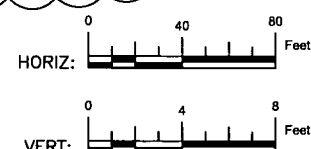




3 PIPE PROFILE  
SCALE: Horiz 1" = 40' - Vert 1" = 4'

AS-BUILT HORIZONTAL CONTROL VERIFIED BY ARTHUR A. WITZELL,  
REGISTERED LAND SURVEYOR, 10/20/2014

**BLUE STAKE NOTE**  
ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



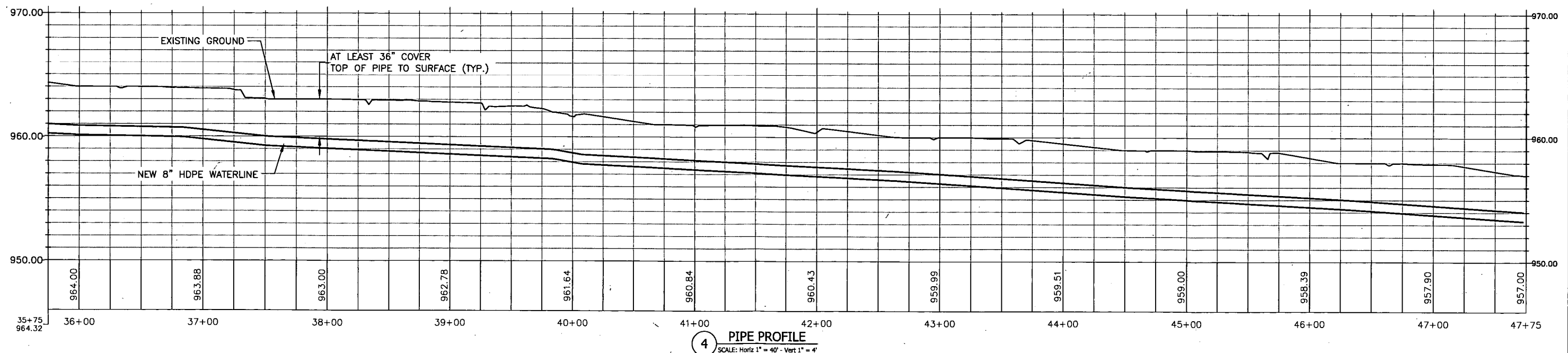
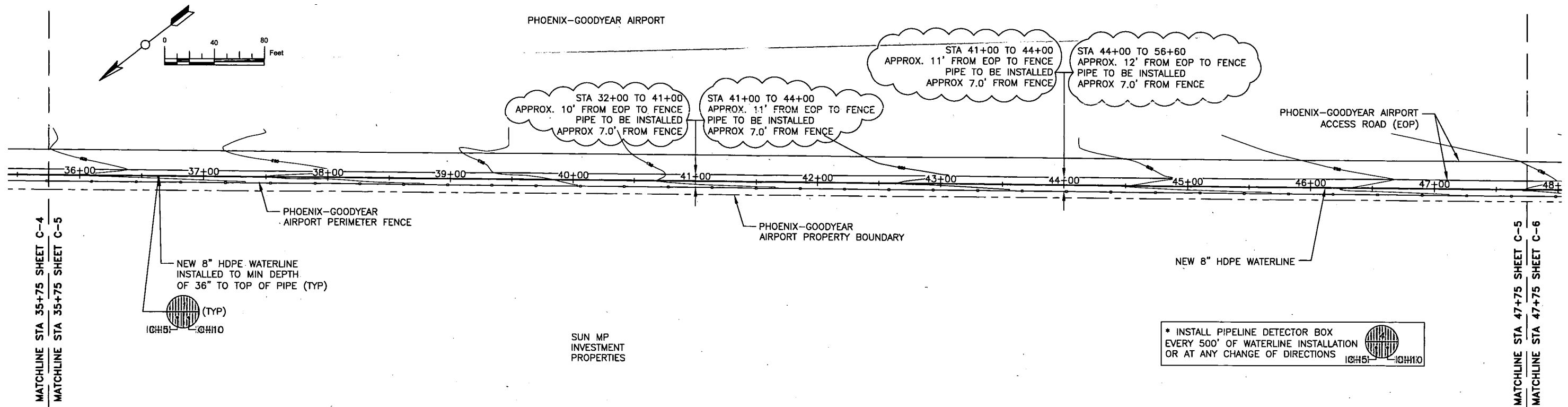
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2	06/07/2013	90% SITE DESIGN	TCW	ERV	ERV	TJS
1	04/29/2013	REVISIONS TO 60% SUBMITTAL	TCW	ERV	ERV	TJS
0	04/10/2013	60% SITE DESIGN	TCW	ERV	ERV	TJS

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PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

**NEW 8" HDPE WATERLINE  
PLAN & PROFILE SHEET 3**

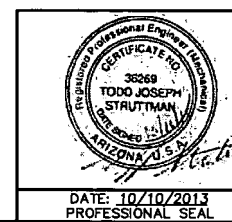
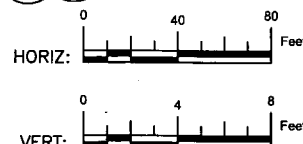
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CADD FILE:	20140307_CML-SITE-PLAN_8_18_14
DESIGNED BY:	TCW
CHECKED BY:	TCW
DATE:	04/19/2013
SHEET	C-4
TOTAL SHEETS	07 OF 23



AS-BUILT HORIZONTAL CONTROL VERIFIED BY ARTHUR A. WITZELL,  
REGISTERED LAND SURVEYOR, 10/20/2014

#### BLUE STAKE NOTE

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



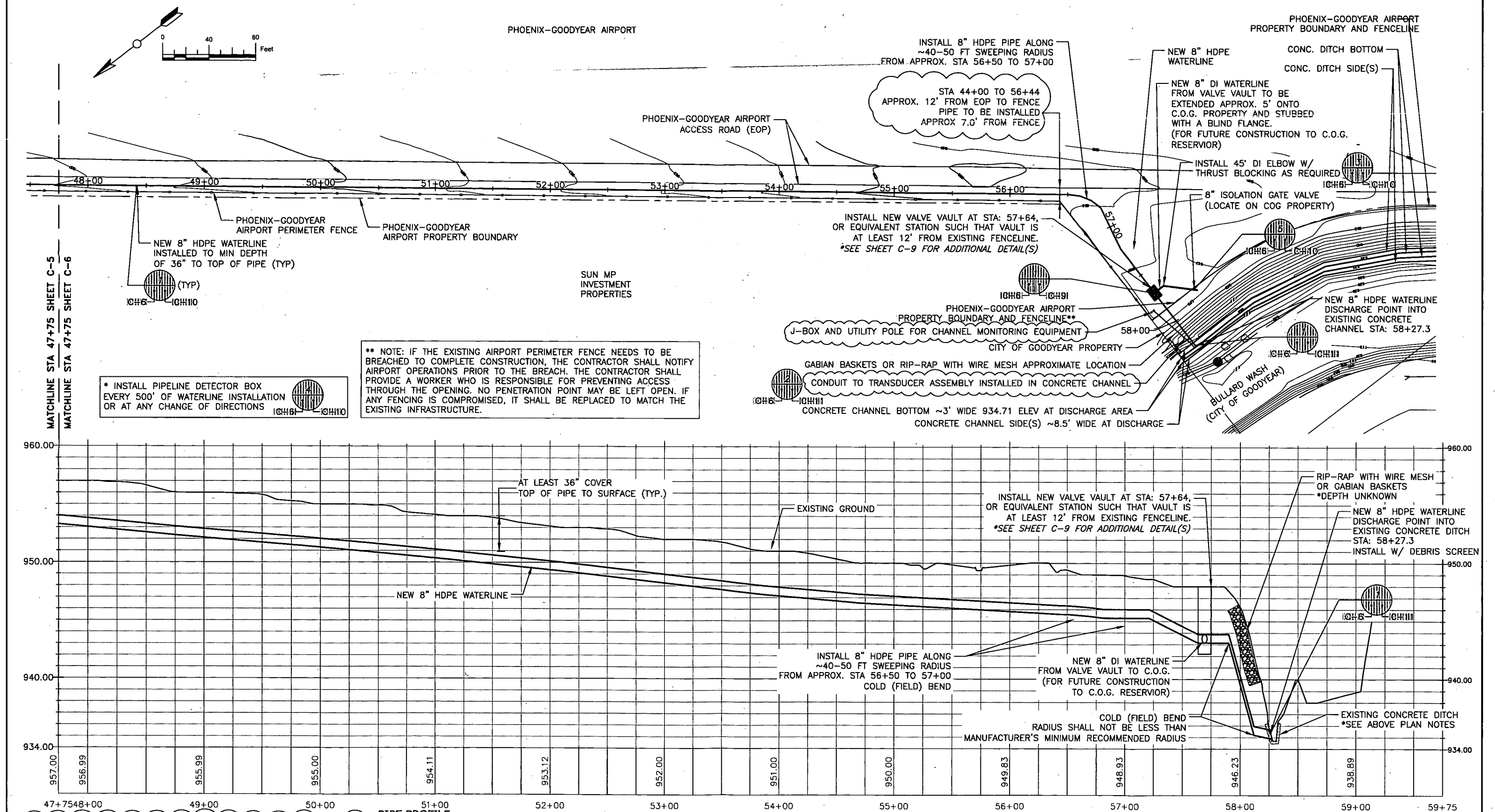
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1	04/28/2013	REVISIONS TO 60% SUBMITTAL	TCW	ERV	ERV	TJS	
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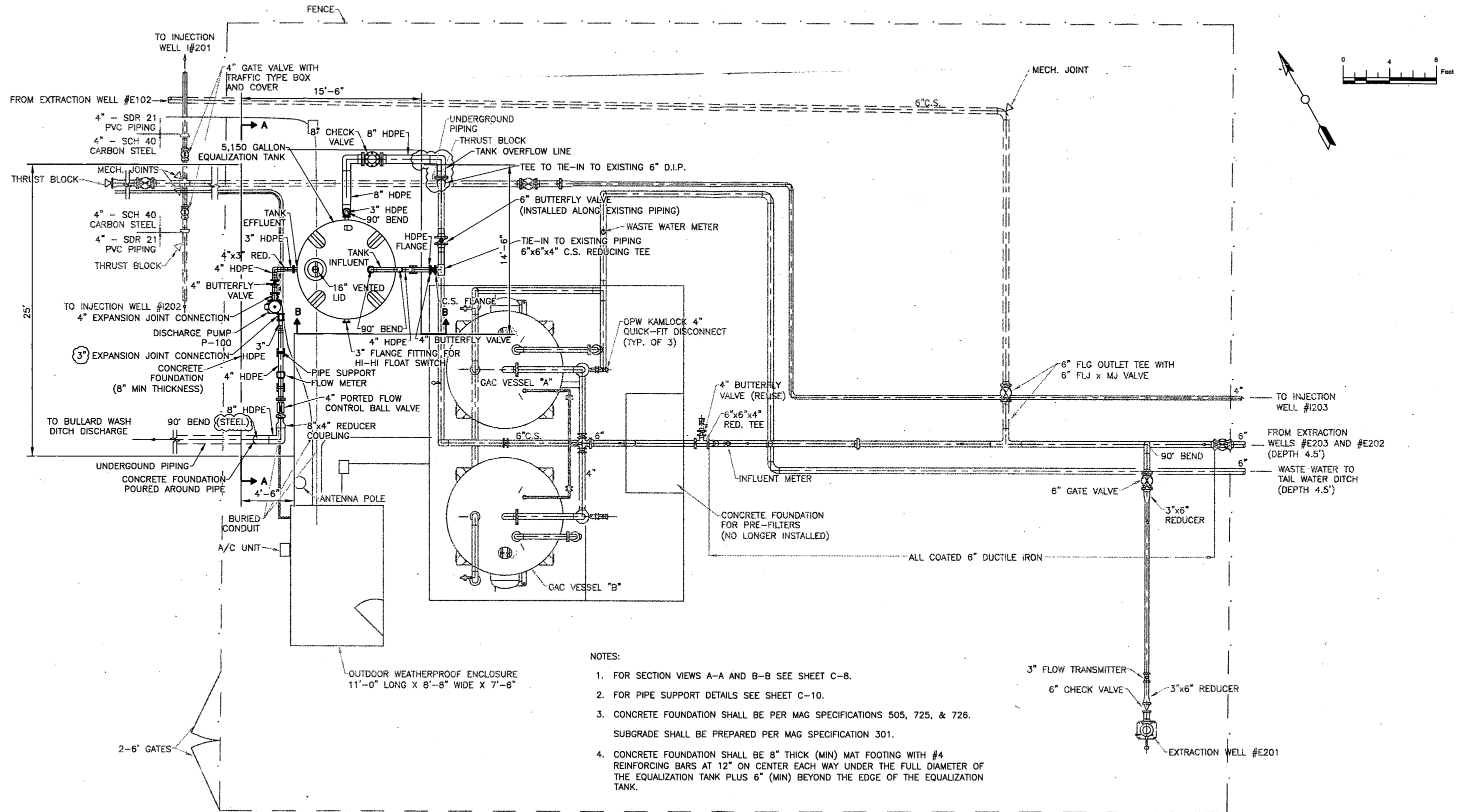
PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

**NEW 8" HDPE WATERLINE  
PLAN & PROFILE SHEET 4**

PROJECT NO:	11168.005.04
CADD DWG FILE:	20140307_CIVIL-SITE-PLAN_6_18_14
DESIGNED BY:	TCW
CHECKED BY:	TCW
DATE:	04/19/2013
SHEET	C-5
OF	23

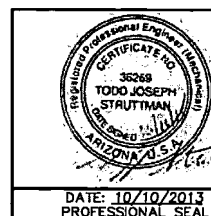






- NOTES:
1. FOR SECTION VIEWS A-A AND B-B SEE SHEET C-8.
  2. FOR PIPE SUPPORT DETAILS SEE SHEET C-10.
  3. CONCRETE FOUNDATION SHALL BE PER MAG SPECIFICATIONS 505, 725, & 726.  
SUBGRADE SHALL BE PREPARED PER MAG SPECIFICATION 301.
  4. CONCRETE FOUNDATION SHALL BE 8" THICK (MIN) MAT FOOTING WITH #4 REINFORCING BARS AT 12" ON CENTER EACH WAY UNDER THE FULL DIAMETER OF THE EQUALIZATION TANK PLUS 6" (MIN) BEYOND THE EDGE OF THE EQUALIZATION TANK.

**BLUE STAKE NOTE**  
 ARIZONA BLUE STAKE NOTIFICATION  
 REQUIRED TWO FULL WORKING DAYS  
 PRIOR TO EXCAVATION  
 1-800-782-5348  
 IN MARICOPA COUNTY (602) 263-1100

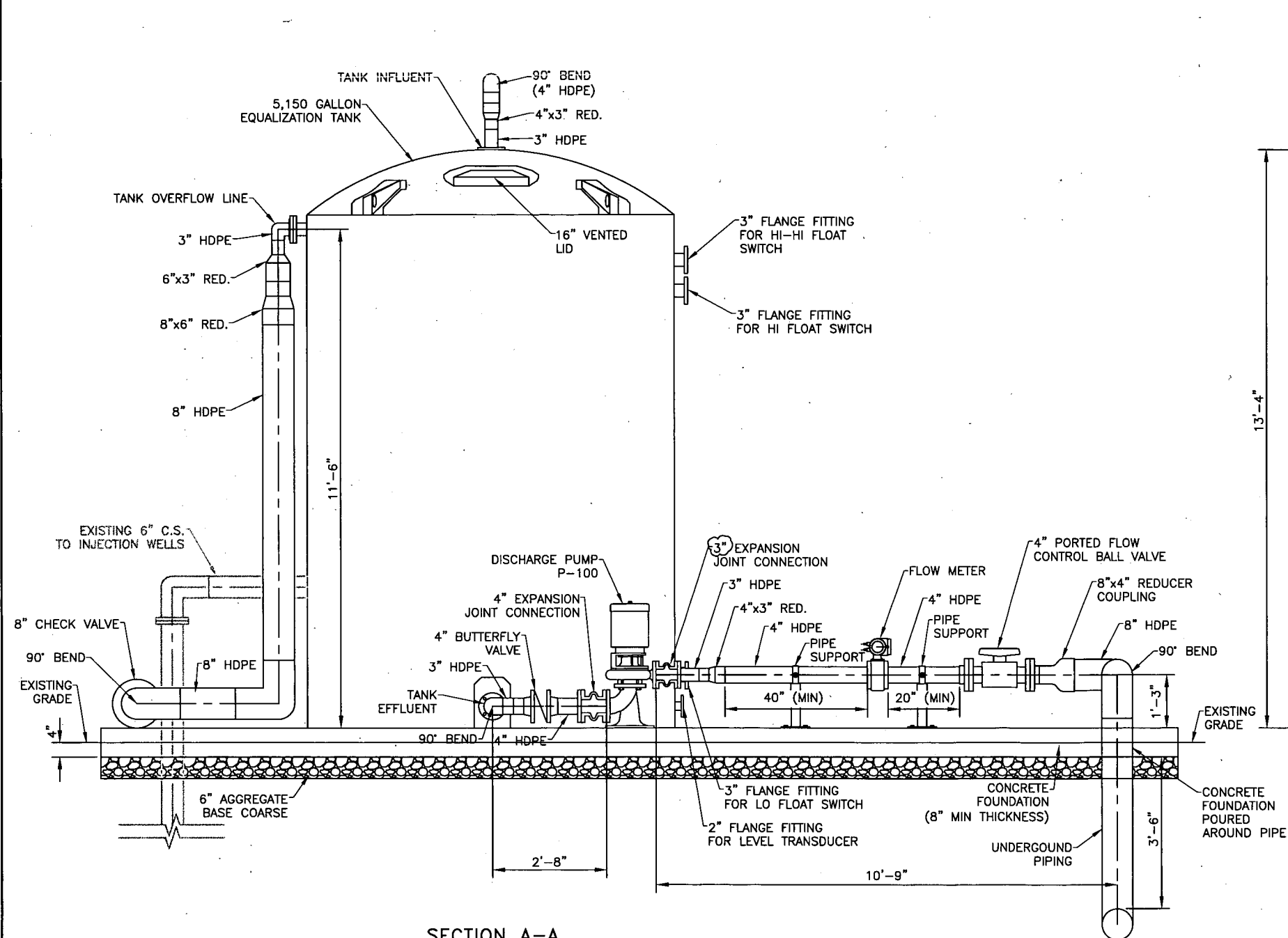


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5	10/01/2013	ISSUED FOR BID	ERV	TJS	ERV	TJS
4	07/11/2013	100% SITE DESIGN	ERV	TJS	ERV	TJS
3	06/18/2013	REVISED OVERFLOW LINE SIZE	ERV	TJS	ERV	TJS
2	06/07/2013	90% SITE DESIGN	ERV	TJS	ERV	TJS
1	04/28/2013	REVISIONS TO 60% SUBMITTAL	---	---	---	---
0	04/10/2013	60% SITE DESIGN	---	---	---	---

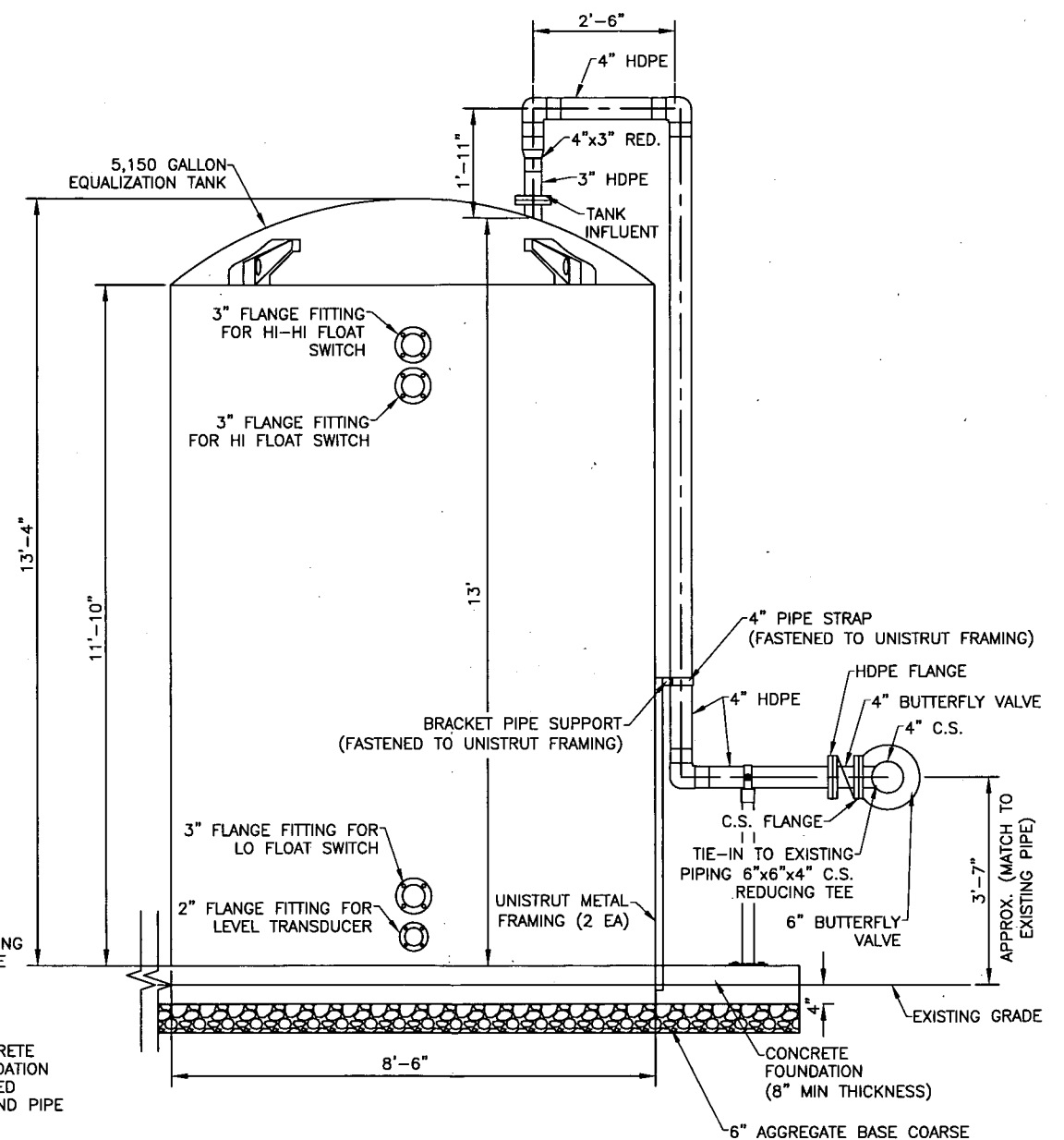
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PHOENIX-GOODYEAR AIRPORT  
 GOODYEAR, ARIZONA  
 SOUTHERN SUBUNIT C PIPELINE  
**PIPING AND CONNECTION  
 DETAILS AT EXISTING  
 SUBUNIT C COMPOUND**

PROJECT NO.	11168.005.04
CADD DWG FILE	C-7 COMPOUND DETAILS
DESIGNED BY:	DATE:
DRAWN BY:	DATE:
CHECKED BY:	DATE:
<b>C-7</b>	
SHEET 10 OF 23	



SECTION A-A



SECTION B-B



# BLUE STAKE NOTE

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



DATE: 10/10/2013  
PROFESSIONAL SEAL

REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	PROJ	LEAD	ENGR
1	01/27/2015	AS-BUILT	ERV	NS	ER	TJS	
2	10/01/2013	ISSUED FOR BID	ERV	TJS	ERV	TJS	
3	07/11/2013	100% SITE DESIGN	ERV	TJS	ERV	TJS	
4	06/18/13	REVISED OVERFLOW LINE SIZE	ERV	TJS	ERV	TJS	
5	06/07/2013	90% SITE DESIGN	ERV	SL	ERV	TJS	



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PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

## SECTION VIEWS AT EXISTING SUBUNIT C COMPOUND

PROJECT NO: 11168.005.04

CADD DWG FILE: C-7 COMPOUND DETAILS

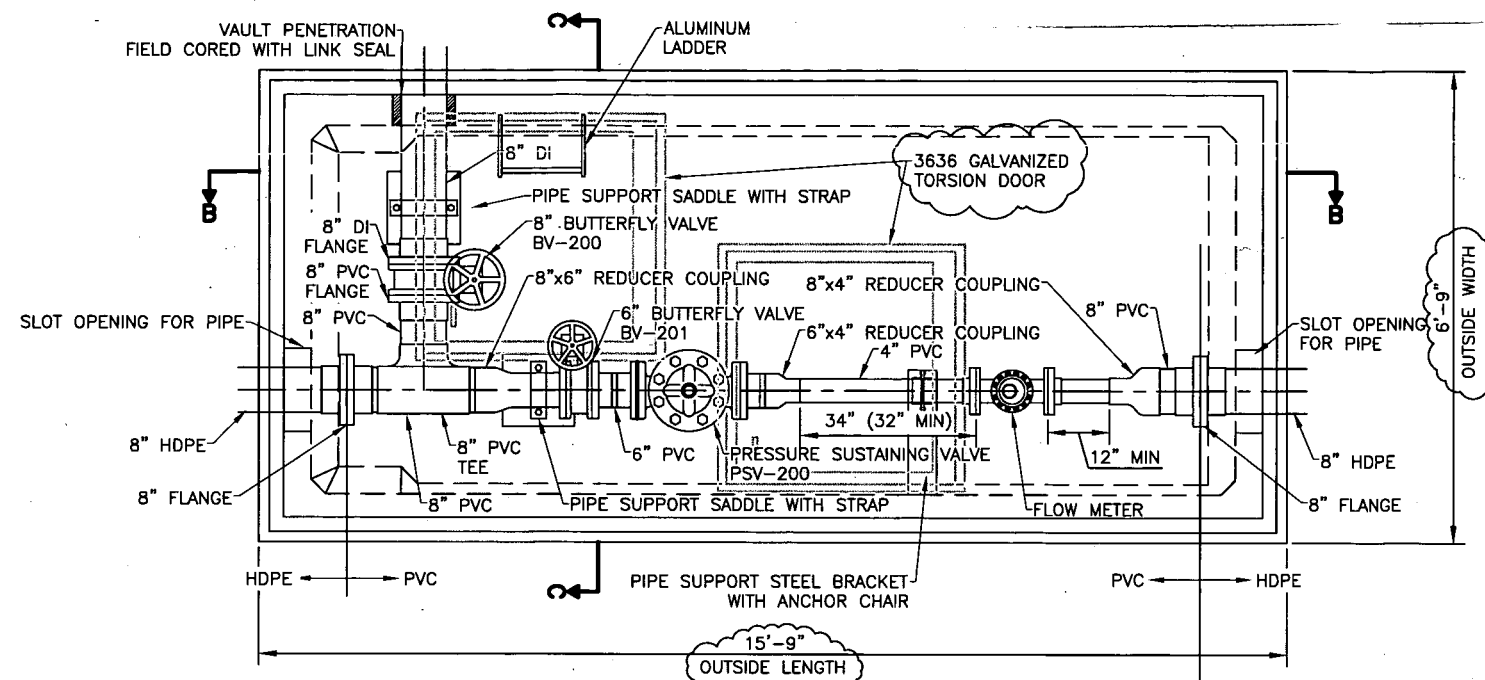
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DRAWN BY: DATE:

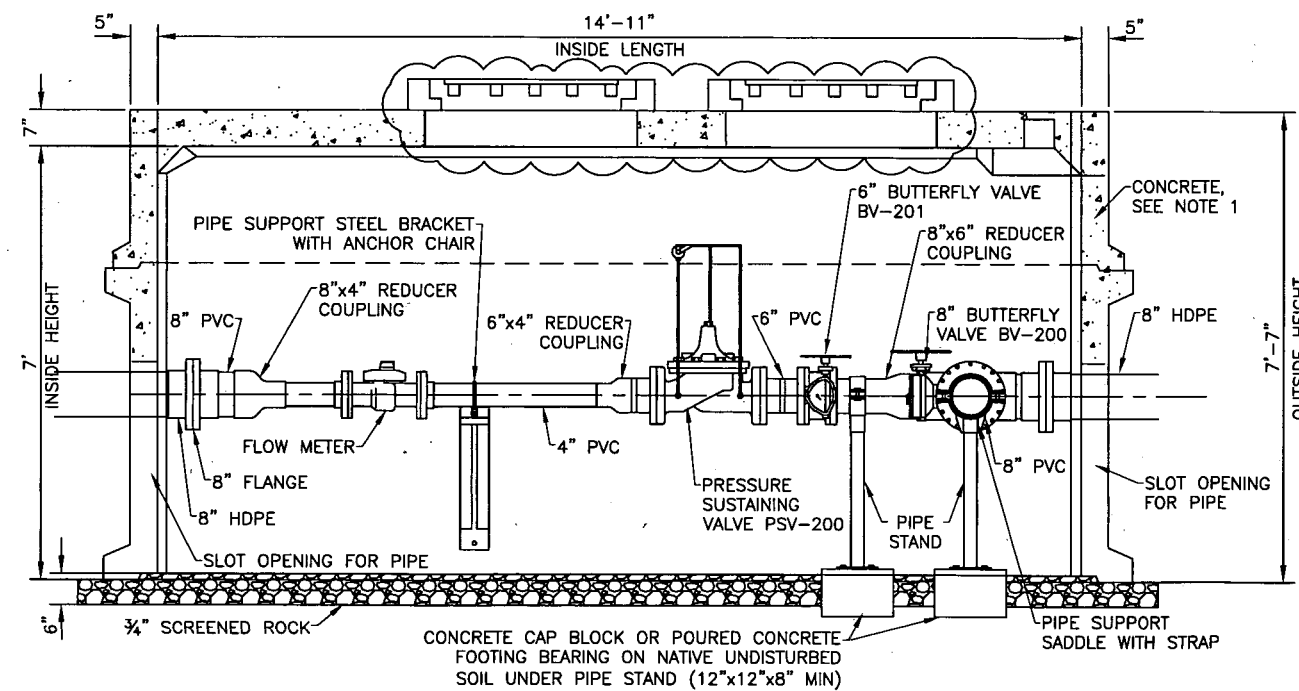
CHECKED BY: DATE:

C-8

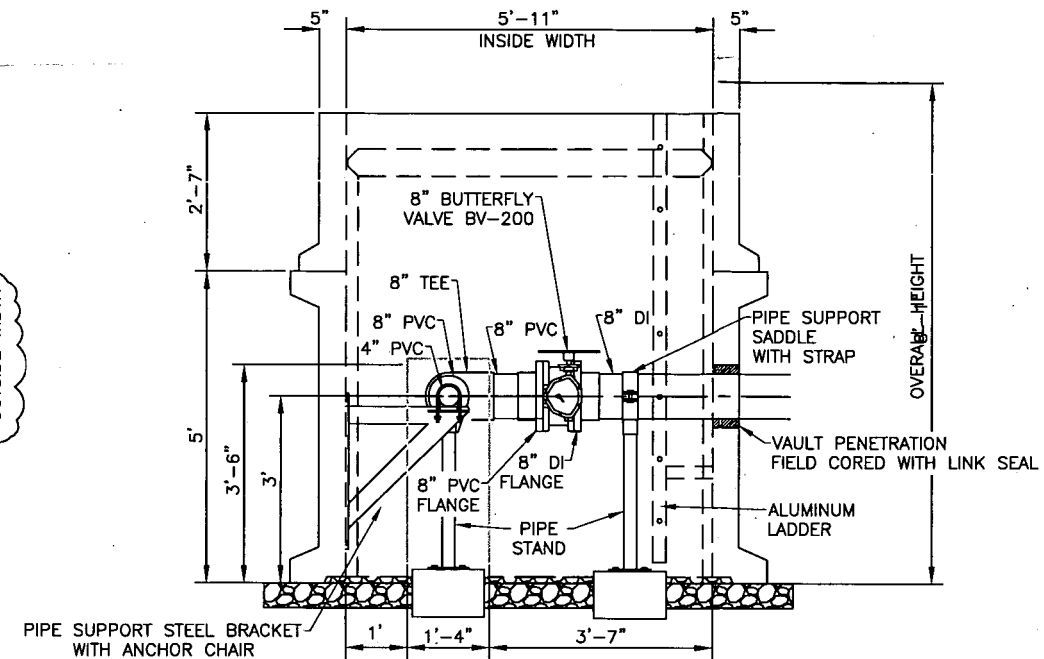
SHEET 11 OF 23



VALVE VAULT PLAN VIEW



SECTION B-B



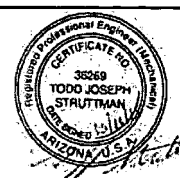
SECTION C-C

NOTES:

1. CONCRETE: CLASS A PER MAG STANDARDS.
2. REBAR: ASTM A-615 GRADE 60.
3. MESH: ASTM A-185 GRADE 65.
4. DESIGN: ACI-318-99 BUILDING CODE  
ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
5. LOADS: NON-TRAFFIC  
SOIL: 40 PCF LATERAL SOIL PRESSURE ABOVE WATER TABLE  
120 PCF SOIL DENSITY
6. ALL JOINTS SHALL BE SEALED USING CONSEAL CS-101 BUTYL RUBBER ROPE.
7. FOR PIPE SUPPORT DETAILS SEE SHEET C-10.

BLUE STAKE NOTE

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



DATE: 10/10/2013  
PROFESSIONAL SEAL

REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	CHK	PROJ	LEAD
6	01/27/2015	AS-BUILT	NS	TJS	ERV	TJS	
5	10/01/2013	ISSUED FOR BID	ERV	TJS	ERV	TJS	
4	07/11/2013	100% SITE DESIGN	ERV	TJS	ERV	TJS	
3	08/18/2013	REVISED VAULT DOOR LOCATIONS	ERV	TJS	ERV	TJS	
2	08/07/2013	90% SITE DESIGN	ERV	TJS	ERV	TJS	
1	04/29/2013	REVISIONS TO 60% SUBMITTAL					
0	04/10/2013	60% SITE DESIGN					



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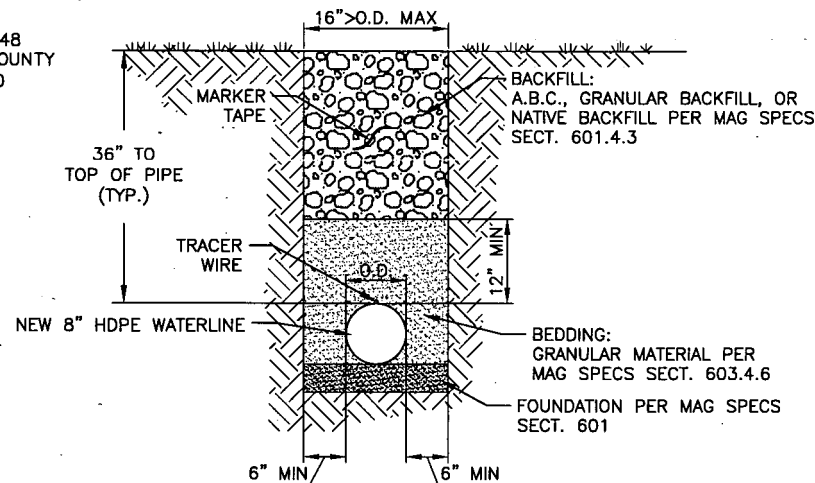
PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

VALVE VAULT DETAILS

PROJECT NO:	11168.005.04
CADD FILE:	C-7 COMPOUND DETAILS
DESIGNED BY:	
CHECKED BY:	
DRAWN BY:	
DATE:	
DATE:	
C-9	
SHEET 12 OF 23	

# BLUE STAKE NOTE

ARIZONA BLUE STAKE  
NOTIFICATION REQUIRED  
TWO FULL WORKING  
DAYS PRIOR TO  
EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY  
(602) 263-1100



## NOTES:

1. TRENCH BACKFILL SHALL BE COMPACTED BY MECHANICAL MEANS ONLY. BACKFILL SHALL BE PLACED IN LIFTS THE HEIGHT OF WHICH SHALL NOT EXCEED THAT WHICH CAN BE EFFECTIVELY COMPACTED DEPENDING ON THE TYPE OF MATERIAL, TYPE OF EQUIPMENT AND METHODS USED, AND UNDER NO CIRCUMSTANCES SHALL EXCEED 1 FOOT.
2. MINIMUM TRENCH COMPACTION DENSITIES SHALL COMPLY WITH MAG SPECS SECT. 601.4.4 TABLE 601-2, TYPE II BACKFILL.
3. TRENCHES UNDER PAVEMENTS SHALL BE BACKFILLED PER ROADCUT DETAIL.

## NOTES:

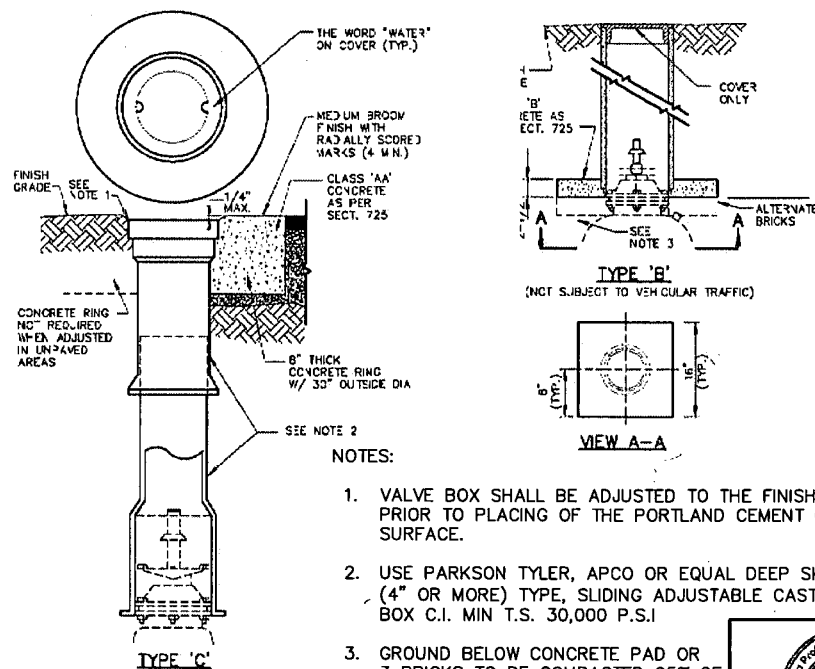
1. PAVEMENT MATCHING AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 336.
2. TYPE OF BACKFILL AND BASE: CLSM SHALL BE 1/2-SACK PER SECTIONS 604 AND 728.
3. TRENCHES LESS THAN 24\"/>
4. BASE, BACKFILL, BEDDING AND FOUNDATION COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 601.
5. ASPHALT CONCRETE SURFACE AND BASE COURSES SHALL COMPLY WITH SECTION 336.2.4.1 UNLESS OTHERWISE SPECIFIED.

## ROADCUT DETAIL

PER MAG DETAIL NO. 200-1

## SOUTH C PIPE 8\"/>

SCALE: NTS.

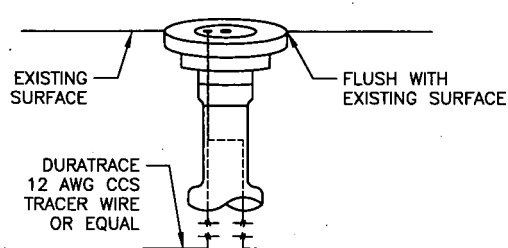


## NOTES:

1. VALVE BOX SHALL BE ADJUSTED TO THE FINISHED GRADE PRIOR TO PLACING OF THE PORTLAND CEMENT CONCRETE SURFACE.
2. USE PARKSON TYLER, APCO OR EQUAL DEEP SKIRTED LID (4\"/>
3. GROUND BELOW CONCRETE PAD OR 3 BRICKS TO BE COMPACTED 95% OF MAX. DENSITY.

## SUBSURFACE ISOLATION VALVE DETAIL

PER MAG DETAIL NO. 391-1

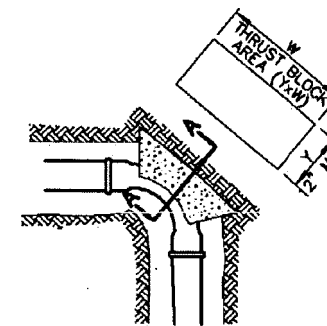


## NOTES:

1. DETECTOR BOXES LOCATED EVERY 500' AND CHANGE IN DIRECTION
2. SNAKEPIT MODEL CD14\*TP OR EQUAL
3. DURATRACE 12 AWG CCS TRACER WIRE TO FOLLOW PIPING

## PIPELINE DETECTOR BOX DETAIL

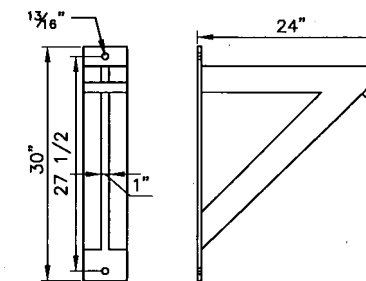
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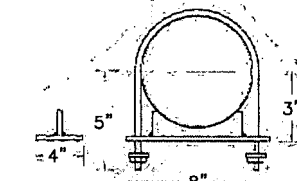
## SECTION A-A

## THRUST BLOCK DETAIL AT ELBOW

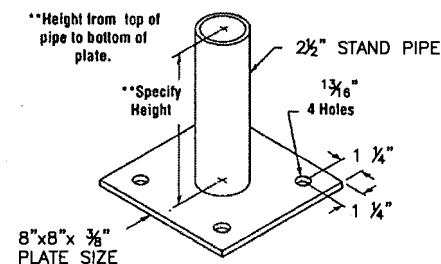
PER MAG DETAIL NO. 380



WELDED STEEL BRACKET PIPE SUPPORT:  
COMPLIANCE: A-A-1192A TYPE 32, MSS-SP 69 TYPE 32  
LOAD: 1500 LBS (MAX)  
FOR USE WITH DROP ROD ANCHOR CHAIR ASSEMBLY



STEEL ANCHOR CHAIR ASSEMBLY:  
FOR USE WITH WELDED STEEL BRACKET PIPE SUPPORT.  
INSTALL WITH SQUARE WASHER SET UNDER LIPS OF ANGLE IRON SECTION OF BRACKET AND NUTS TIGHTENED ON THE U-BOLT TO PREVENT MOVEMENT OF ANCHOR.



STEEL PIPE SADDLE WITH STRAP:  
FOR USE WITH BASE STAND.

## PIPE SUPPORT DETAILS

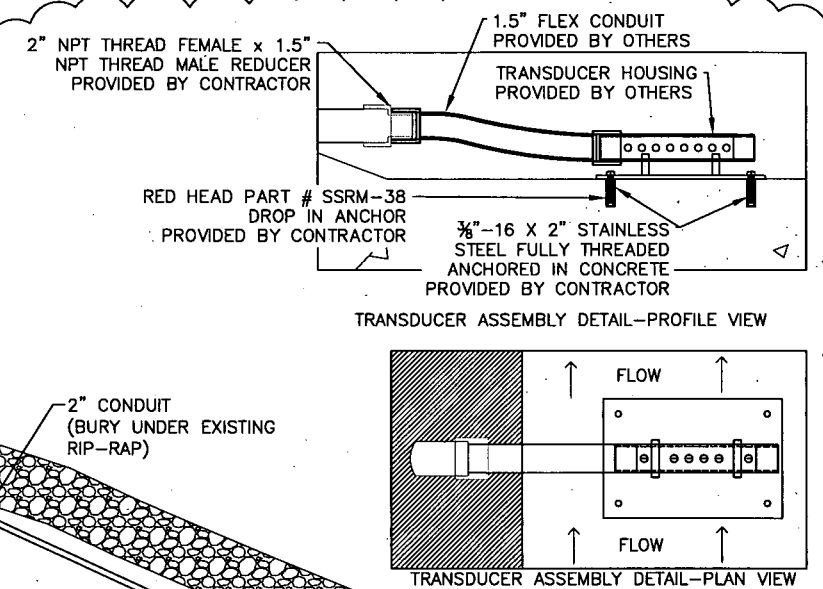
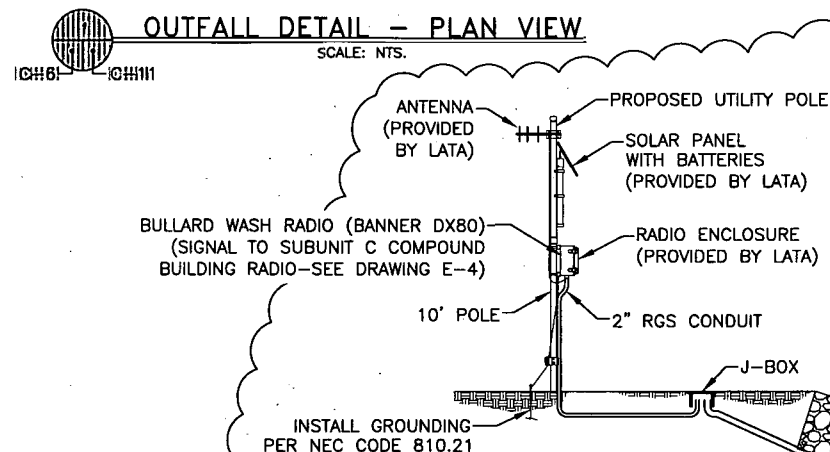
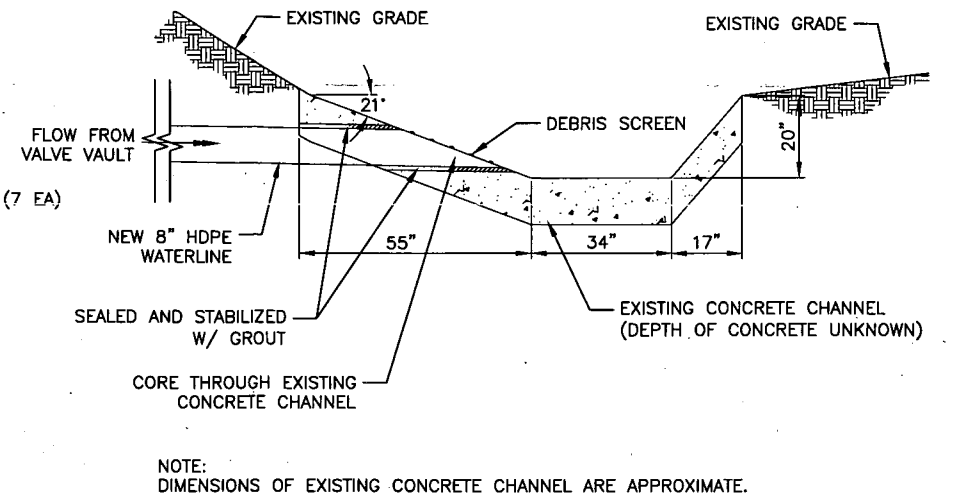
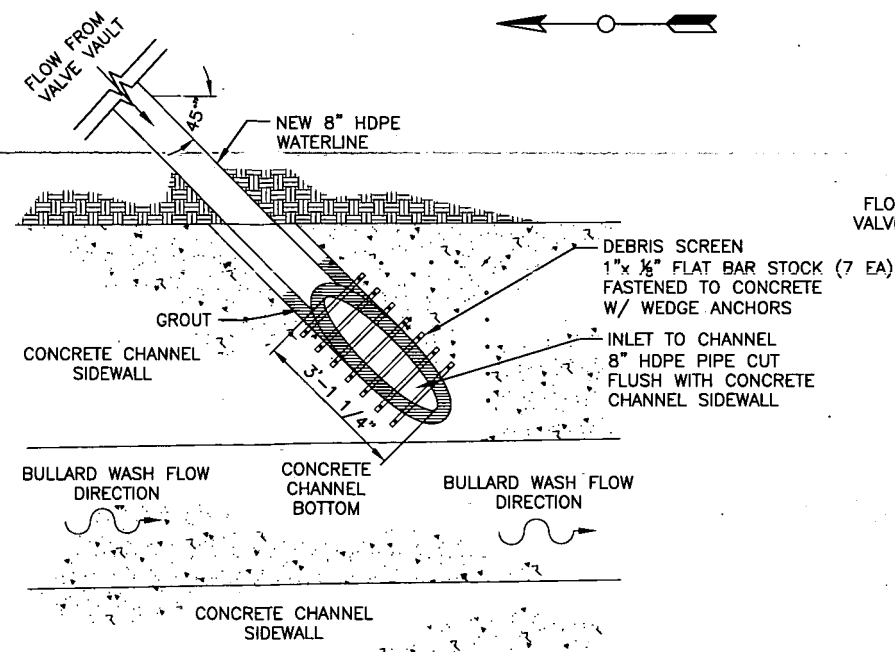
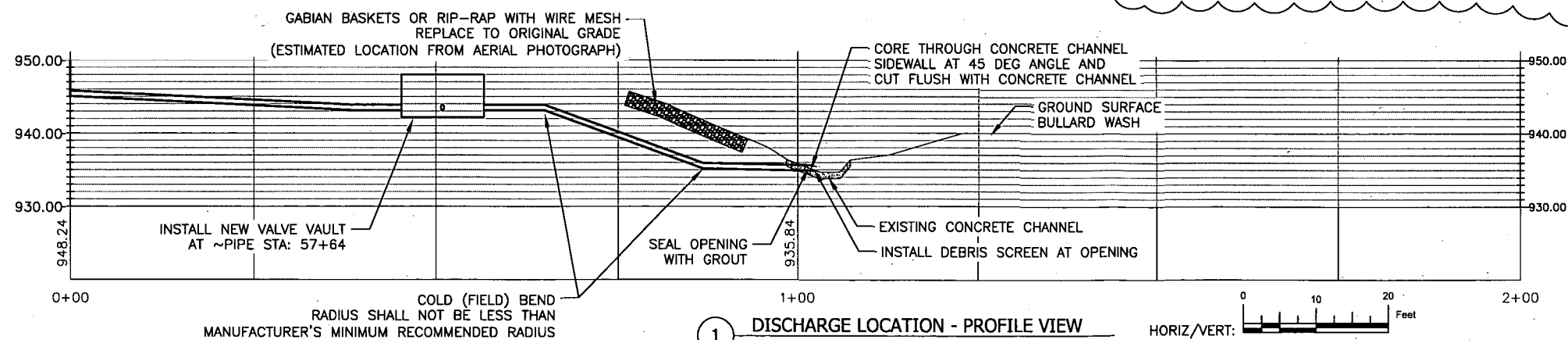
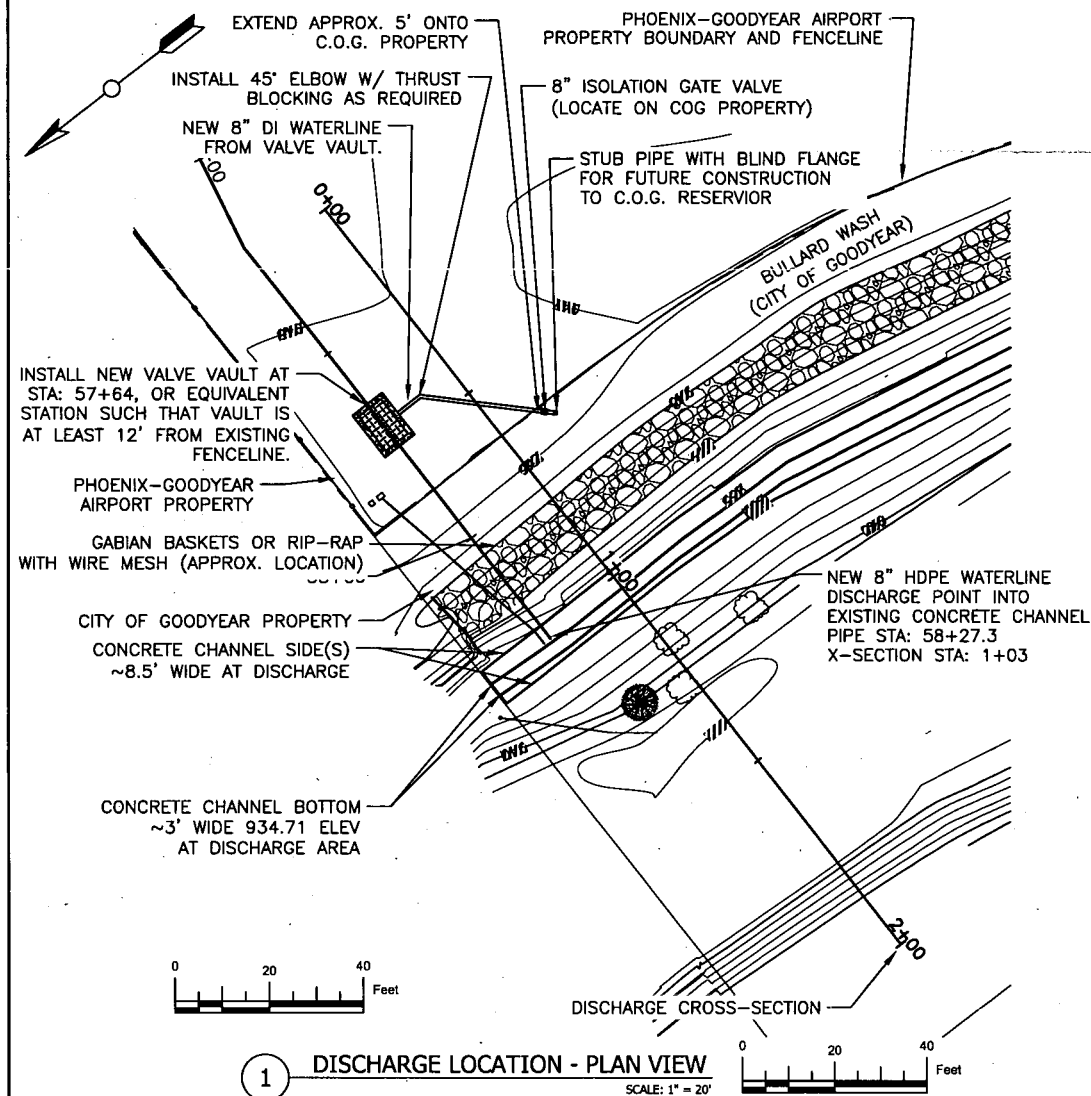
NOT TO SCALE

PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

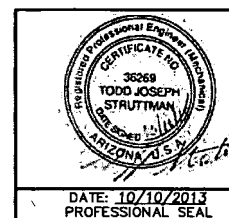
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PROJECT NO:	11168.005.04
CADD FILE:	20140307_CIVIL-SITE-PLAN_8_18_14
DESIGNED BY:	DATE:
DRAWN BY:	DATE:
CHECKED BY:	DATE:
C-10	
SHEET 13 OF 23	





**BLUE STAKE NOTE**  
ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100.

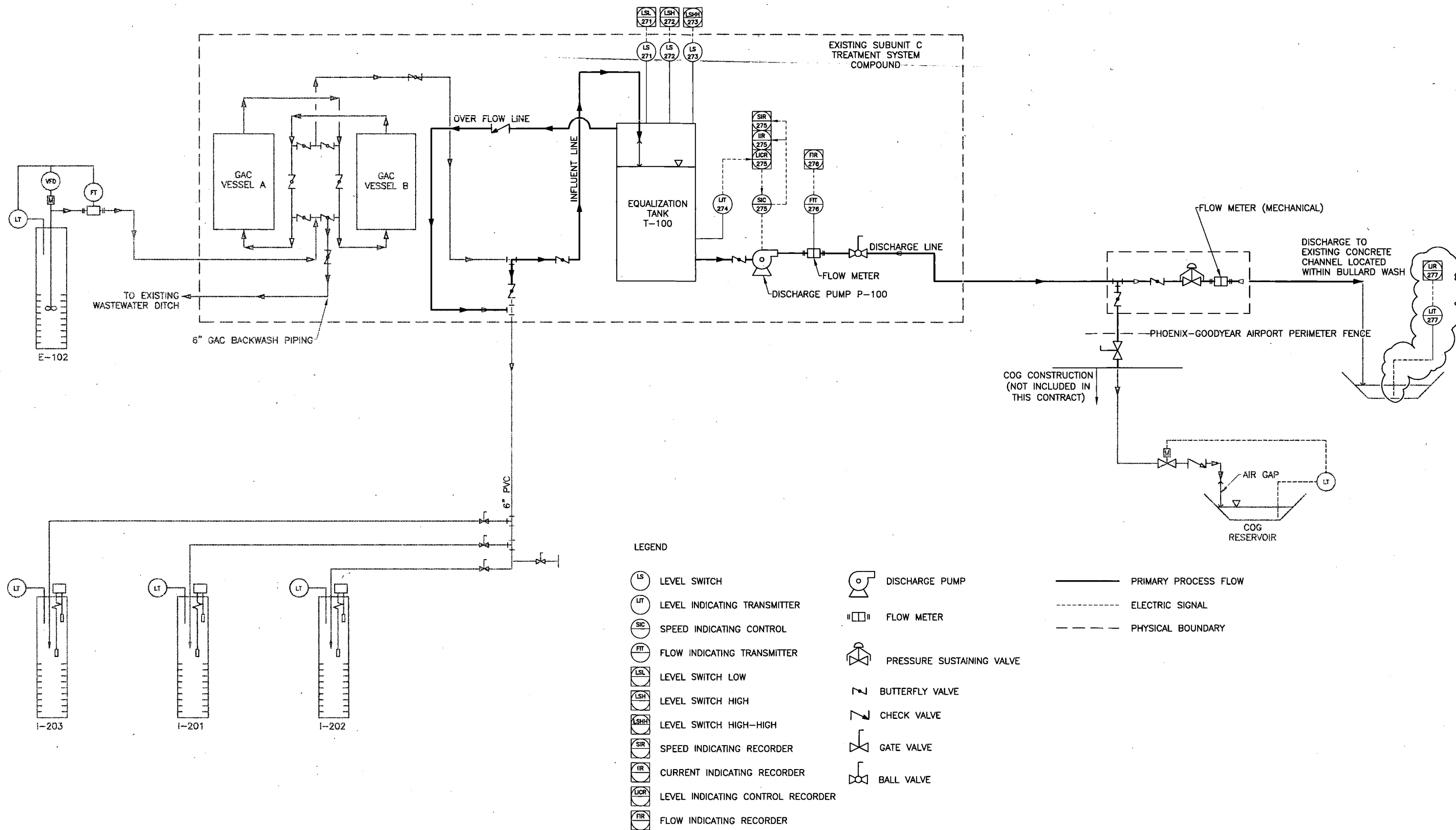


REV	DATE	DESCRIPTION	BY	CHK	APP	DATE
1	01/22/2015	AS-BUILT	NS	ERV	ERV	TJS
2	11/11/13	ADDENDUM 1	ERV	TJS	ERV	TJS
3	10/01/2013	ISSUED FOR BID	ERV	TJS	ERV	TJS
4	07/11/2013	100% SITE DESIGN	ERV	TJS	ERV	TJS
5	08/18/13	REVISED GABIAN BASKET LOCATIONS	ERV	TJS	ERV	TJS
6	08/07/2013	90% SITE DESIGN	TCW	ERV	ERV	TJS
7	04/28/2013	REVISIONS TO 60% SUBMITTAL	TCW	ERV	ERV	TJS
8	04/10/2013	60% SITE DESIGN	TCW	ERV	ERV	TJS

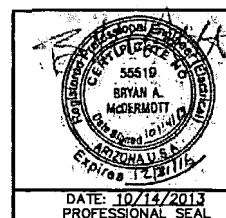
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PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE  
**NEW 8" HDPE WATERLINE  
DISCHARGE  
LOCATION DETAILS**

PROJECT NO: 11168.005.04  
CADD FILE: 20140307 CIVIL-SITE-PLAN\_6\_18\_14  
DESIGNED BY: DATE: 04/19/2013  
DRAWN BY: TCW  
CHECKED BY: DATE: 04/19/2013  
**C-11**  
SHEET 14 OF 23



**BLUE STAKE NOTE**  
 ARIZONA BLUE STAKE NOTIFICATION  
 REQUIRED TWO FULL WORKING DAYS  
 PRIOR TO EXCAVATION  
 1-800-782-5348  
 IN MARICOPA COUNTY (602) 263-1100

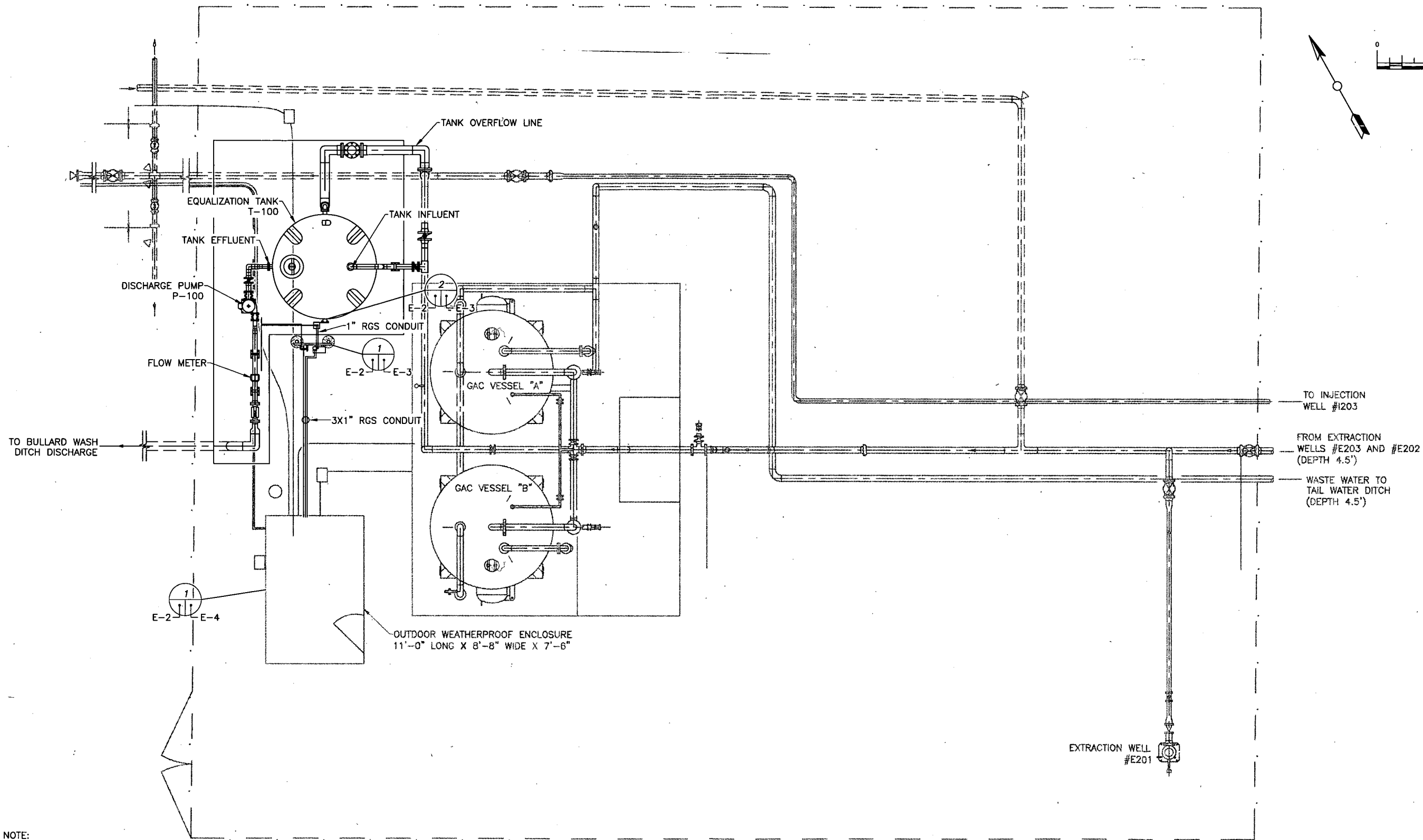


REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	PROJ	LEAD
4	01/22/2015	AS-BUILT	NS	ERV	ERV	TJS
3	06/19/14	Addition of Channel Monitoring Equipment	RT			
2	10/01/2013	ISSUED FOR BID	JGR	ERV	TJH	BAW
1	07/11/2013	100% SITE DESIGN	JGR	ERV	TJH	BAW
0	06/11/2013	90% SITE DESIGN	JGR	SL	---	TJS

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PHOENIX-GOODYEAR AIRPORT  
 GOODYEAR, ARIZONA  
 SOUTHERN SUBUNIT C PIPELINE  
**PROCESS & INSTRUMENTATION  
 DIAGRAM**

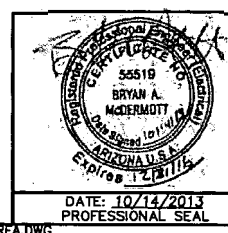
PROJECT NO:	11168.005.04
CADD FILE:	E-1 P&ID
DESIGNED BY:	TJS
DRAWN BY:	JGR
CHECKED BY:	---
DATE:	06/10/13
DATE:	06/11/13
DATE:	---
<b>E-1</b>	
SHEET 15 OF 23	



NOTE:  
CONDUIT PENETRATION AT BUILDING AND  
DISCONNECT/JUNCTION BOX LOCATIONS ARE APPROXIMATE.  
FIELD FIT AS REQUIRED.

**BLUE STAKE NOTE**

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



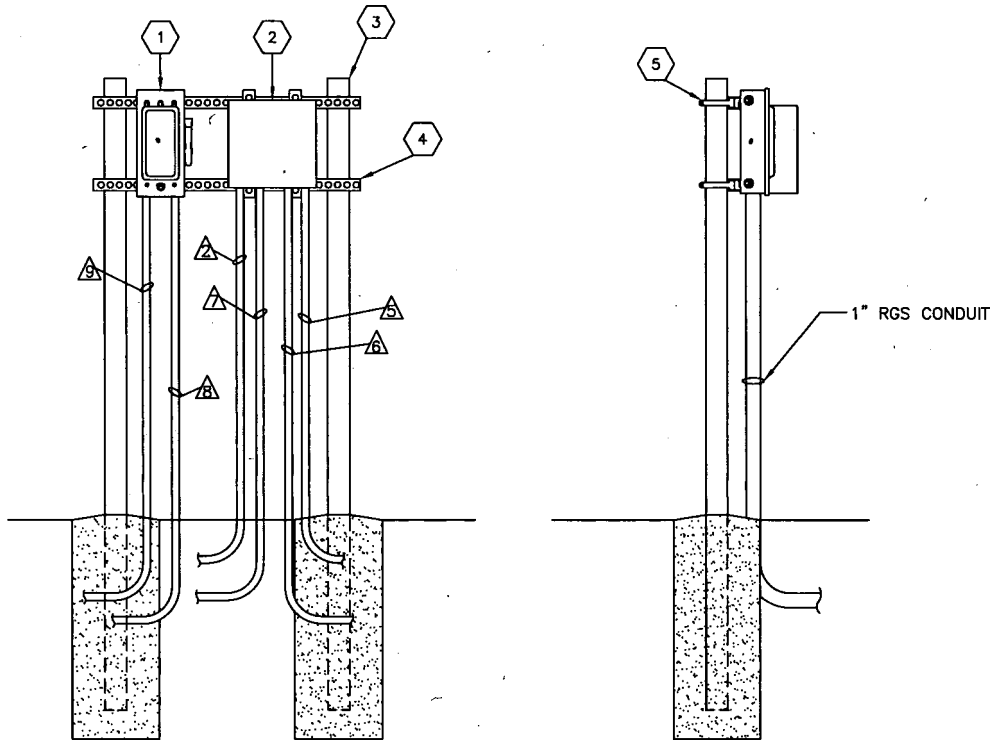
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4	01/22/2015	AS-BUILT	NS	ERV	ERV	TJS
3	10/01/13	ISSUED FOR BID	JGR	ERV	TJH	BAM
2	07/11/13	100% SITE DESIGN	JGR	ERV	TJH	BAM
1	06/18/13	120V CONDUIT ADDED	JGR	SL	SL	TJS
0	06/14/13	90% SITE DESIGN	JGR	SL	SL	TJS

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PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE  
  
**CONDUIT LAYOUT AT EXISTING  
SUBUNIT C COMPOUND**

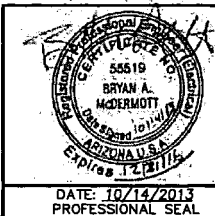
PROJECT NO:	11168.005.04
CADD FILE:	E-2 ELEC GAC AREA
DESIGNED BY:	TJH
DATE:	06/05/13
DRAWN BY:	JGR
DATE:	06/07/13
CHECKED BY:	TJS
DATE:	06/10/13
<b>E-2</b>	
SHEET 16 OF 23	

Bill of Material				
Item #	Qty	Description	Part Number	Manufacturer
1	1	30 AMP NONFUSED DISCONNECT 3R	HU361	SQUARE D
2	2	12"X12"X6" ENCLOSURE	SCE-12EL1206LP	SAGINAW
3	2	3" RGS	-	-
4	4	1 5/8" UNISTRUT (TYP) (6' LONG)	-	-
5	4	UNISTRUT CLAMP (TYP)	-	-
6	3	HORIZONTAL LEVEL SWITCH	L6EPB-B-S-3-O-B1HB	DWYER INSTRUMENTS
7	1	CONDULET LR	-	-
8	3	CONDULET T	-	-
9	1	PRESSURE TRANSMITTER, 0-30 psi W/ LOCAL DISPLAY	2088	ROSEMOUNT
	1	SCREW IN SURGE PROTECTION BARRIER	FN-LB-I	PEPPERL+FUCHS
10	1	6"X6"X6" ENCLOSURE	SCE-6R66	SAGINAW



**DISCONNECT AND JUNCTION BOX**  
E-2 E-3 NTS FIELD FIT AS REQUIRED

**BLUE STAKE NOTE**  
ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100

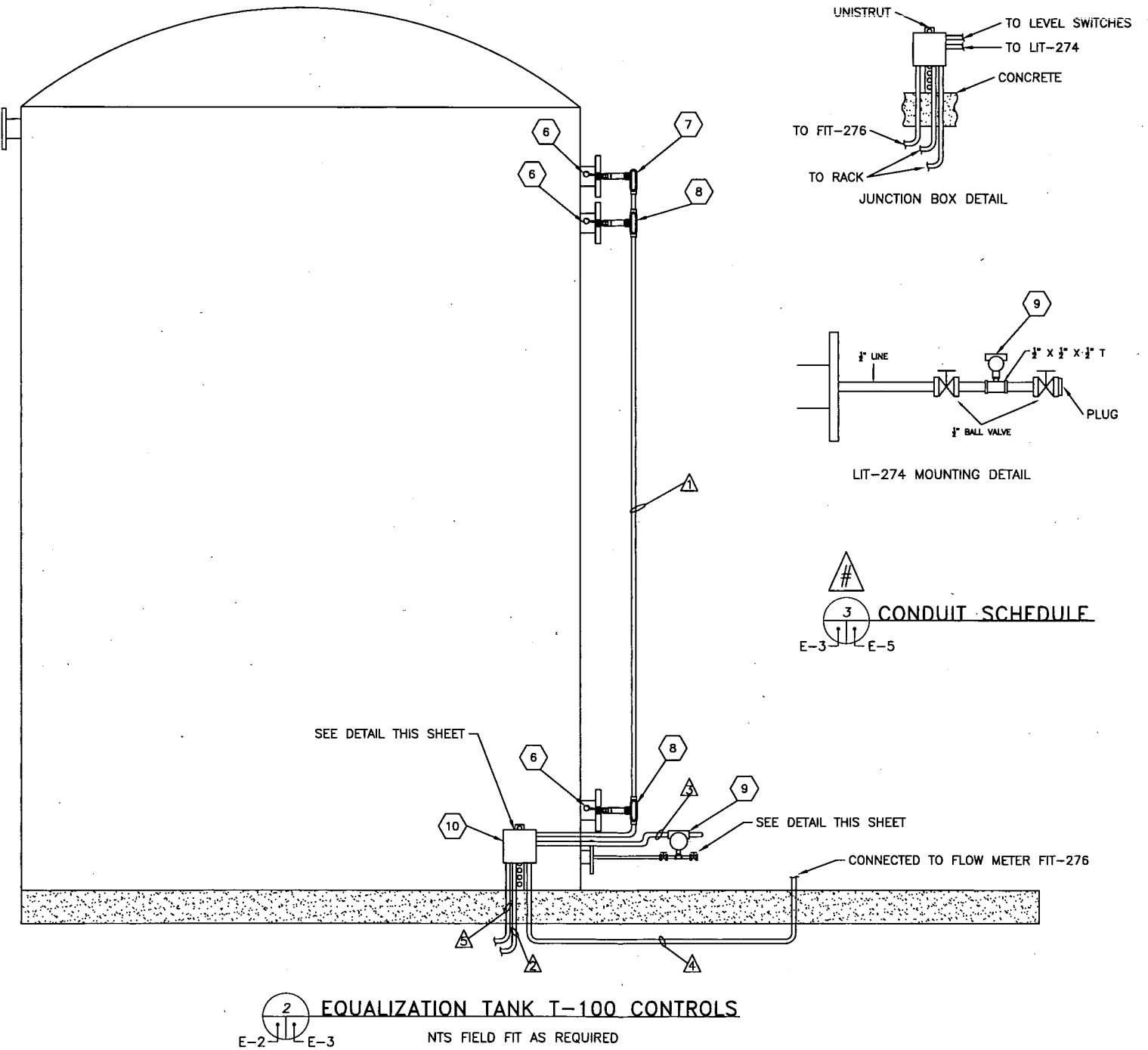


REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	CHK	PROJ	LEAD	ENGR
4	01/22/2015	AS-BUILT	NS	ERV	ERV	TJS		
3	10/01/13	ISSUED FOR BID	JGR	ERV	TJH	BAM		
2	07/11/13	100% SITE DESIGN	JGR	ERV	TJH	BAM		
1	06/18/13	120V CONDUIT ADDED	TJH	JGR	RJH	TJS		
0	06/07/13	90% SITE DESIGN	TJH	JGR	TJH	TJS		

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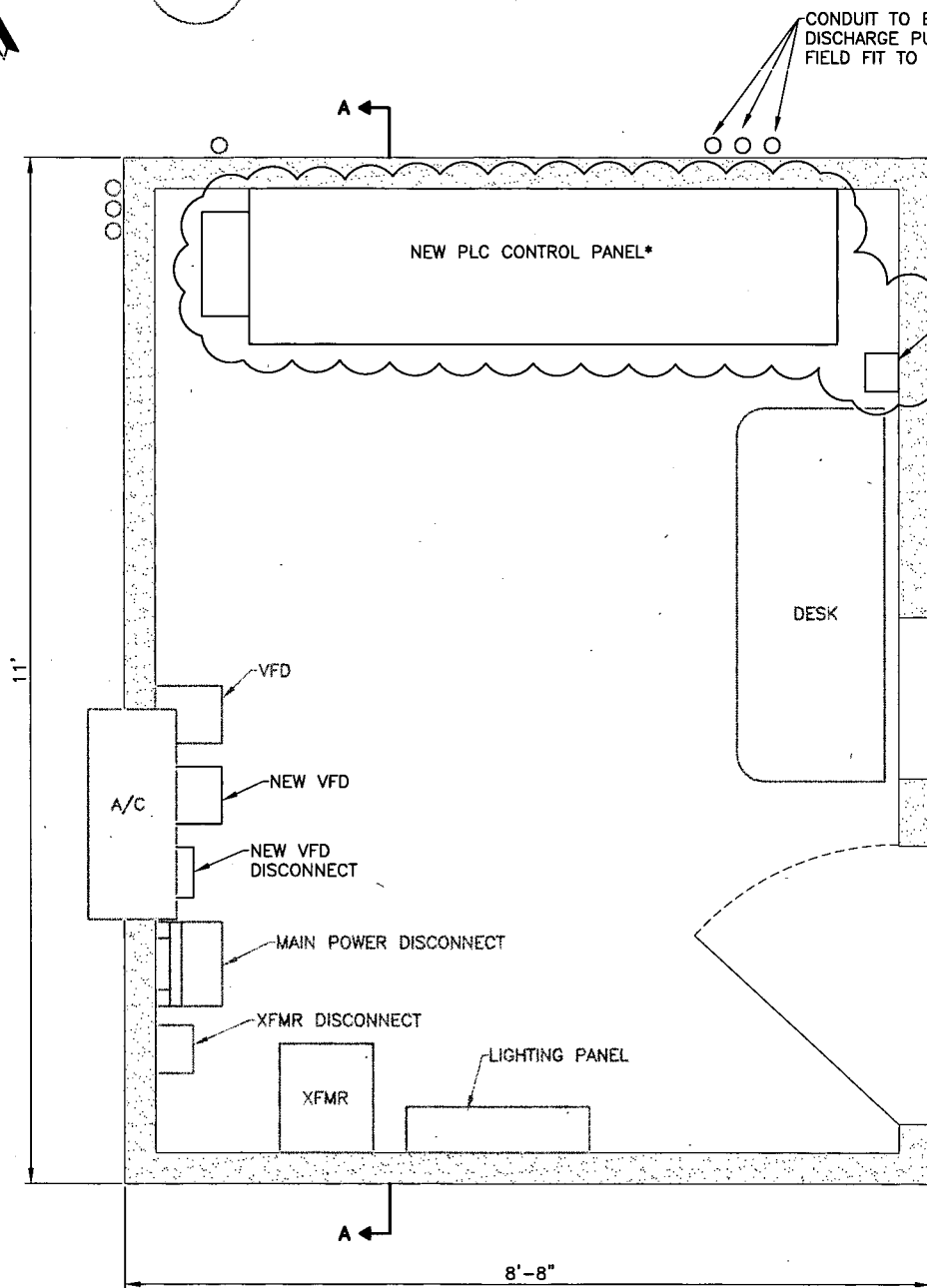
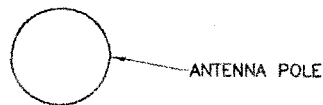
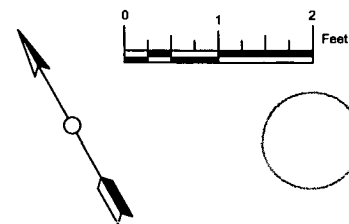
PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE  
**CONDUIT AND ELECTRICAL  
DETAILS LAYOUT**

PROJECT NO:	11168.005.04
CADD DWG FILE:	E-3 ELCDDETAILS
DESIGNED BY:	TJH
DRAWN BY:	JGR
CHECKED BY:	TJS
DATE:	06/05/13
DATE:	06/07/13
DATE:	06/10/13
<b>E-3</b>	
SHEET 17 OF 23	



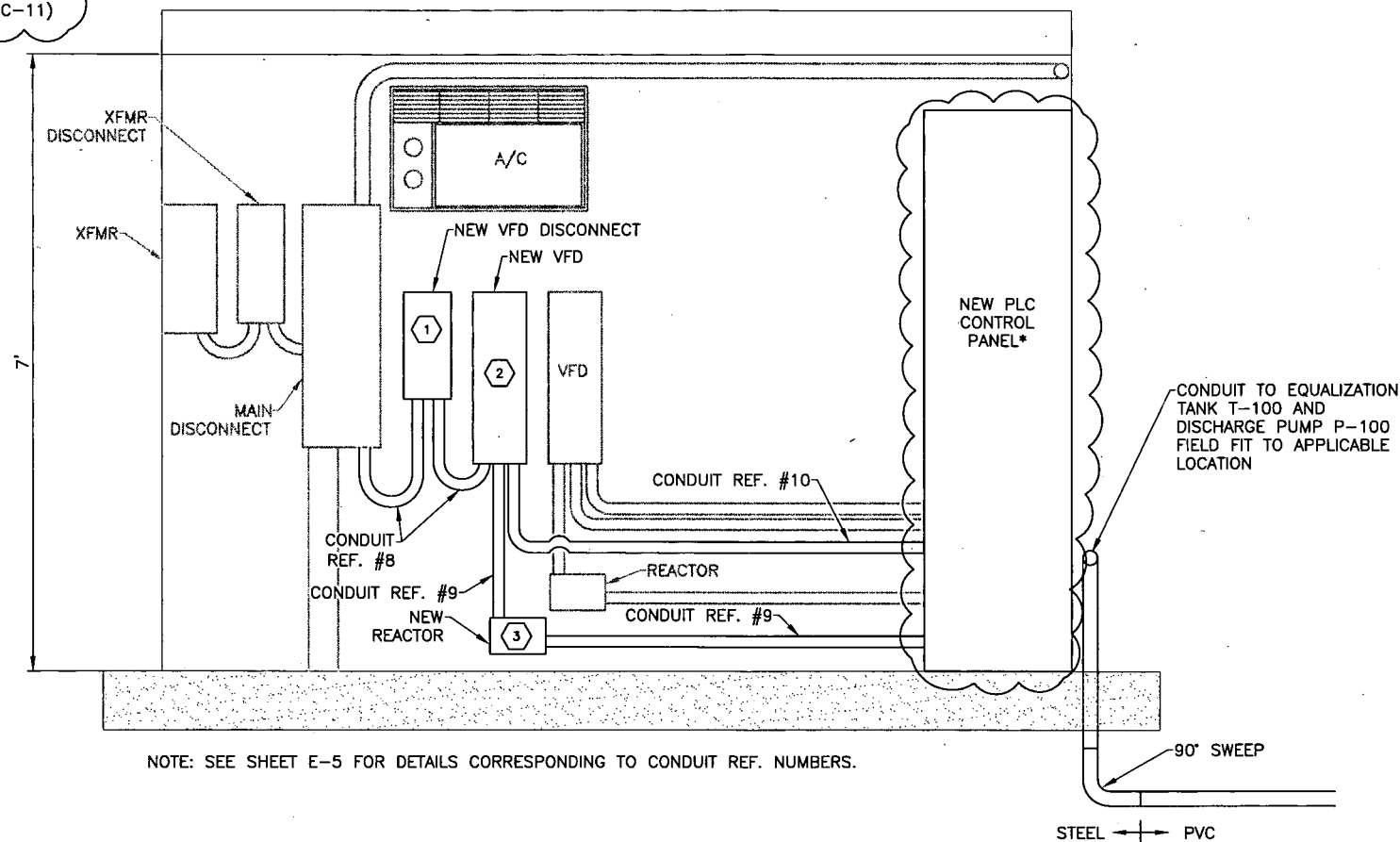
**EQUALIZATION TANK T-100 CONTROLS**  
E-2 E-3 NTS FIELD FIT AS REQUIRED





PLAN VIEW  
E-2 E-4

Bill of Material				
ITEM#	QUANTITY	DESCRIPTION	PART#	MANUFACTURER
1	1	FUSED DISCONNECT W/ CLASS J FUSES OR APPROVED	H361	SQUARE D
2	1	VFD	SVX015-A1-4A1N1	CUTLER HAMMER
3	1	LINE REACTOR	KDRULD2PE01	TCI



NOTE: SEE SHEET E-5 FOR DETAILS CORRESPONDING TO CONDUIT REF. NUMBERS.

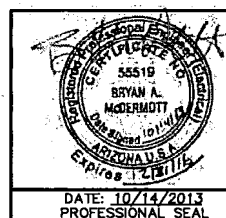
SECTION A-A

NOTES:

LOCATIONS OF EXISTING EQUIPMENT ARE APPROXIMATE. CONTRACTOR TO FIELD FIT NEW EQUIPMENT WITHIN BUILDING AS SHOWN.

\*NEW PLC CONTROL PANEL NOT PART OF THIS CONTRACT. DETAILS CAN BE FOUND IN THE PHOENIX-GOODYEAR AIRPORT INSTRUMENTATION AND CONTROLS UPGRADES TO SOUTHERN SUBUNIT C AND SUBUNIT A AIR STRIPPER TREATMENT SYSTEMS AS-BUILT DRAWING SET DATED 1/22/2015.

**BLUE STAKE NOTE**  
ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



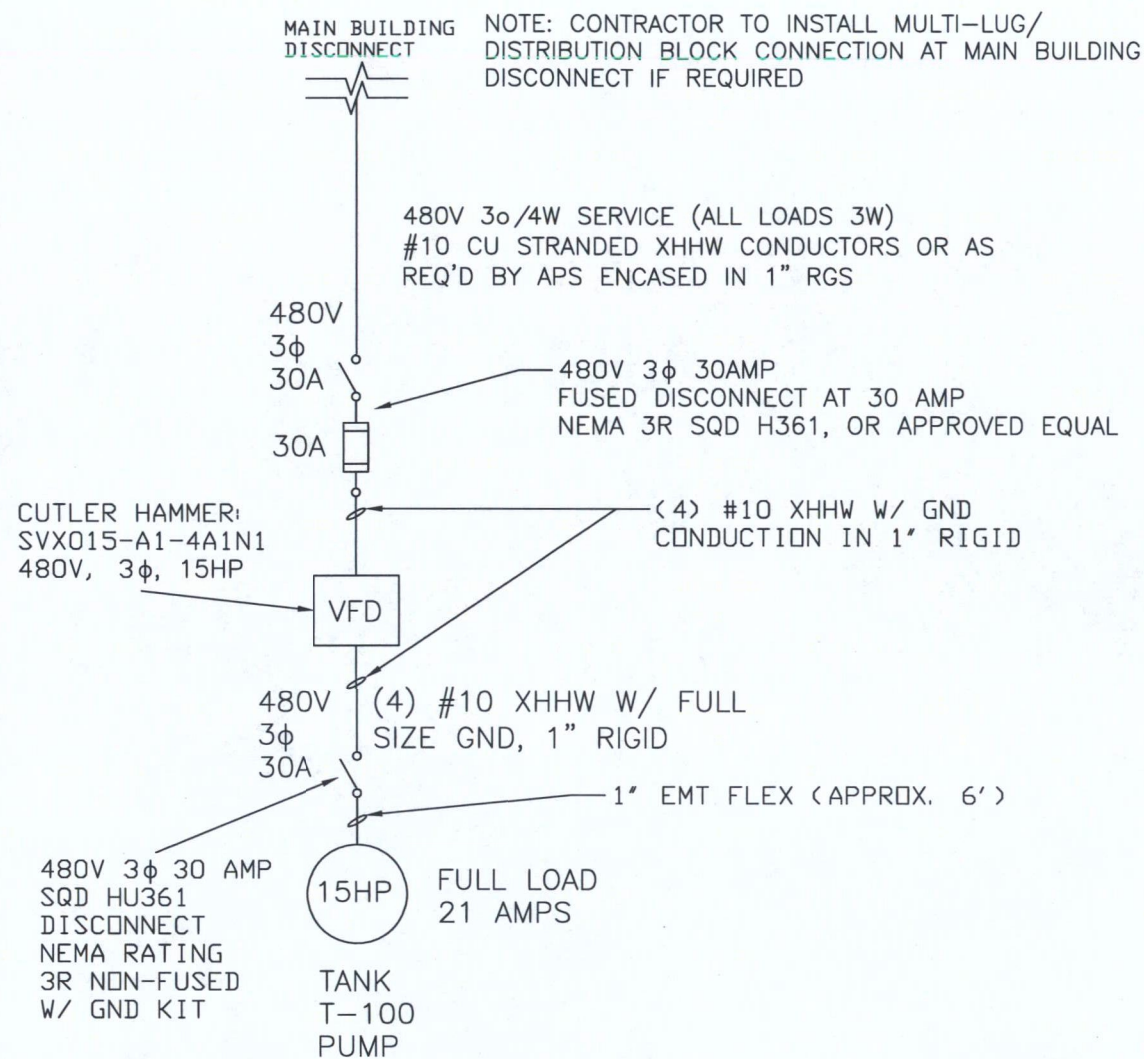
REV	DATE	DESCRIPTION	BY	CHK	ENG	LEAD
5	01/22/2015	AS-BUILT	NS	ERV	ERV	TJS
4	11/11/13	ADDENDUM 1	ERV	TJH	TJH	BAM
3	10/01/13	ISSUED FOR BID	JGR	ERV	TJH	BAM
2	07/11/13	100% SITE DESIGN	JGR	ERV	TJH	BAM
1	06/18/13	120V CONDUIT ADDED, REPOSITIONED DISCONNECT	JGR	SL	TJH	TJS
0	06/07/13	90% SITE DESIGN	JGR	SL	TJH	TJS

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PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE  
**ELECTRICAL LAYOUT  
EXISTING SUBUNIT C  
COMPOUND BUILDING**

PROJECT NO:	11168.005.04
CADD DWG FILE:	E-4 ELECPANELLAYOUT
DESIGNED BY:	TJH
DATE:	06/05/13
DRAWN BY:	JGR
DATE:	06/07/13
CHECKED BY:	SL
DATE:	06/12/13
<b>E-4</b>	
SHEET 18 OF 23	





ONE LINE DIAGRAM

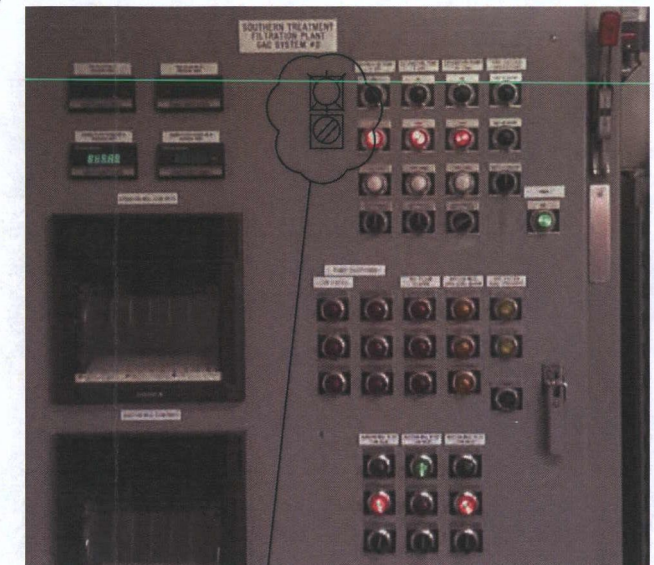
21 AMPS OF  
LOAD ADDED  
TO SYSTEM

CONDUIT SCHEDULE			
CONDUIT REF. #	CONDUIT SIZE	WIRE FILL	DETAILS
1	1" RGS	6 EA, 14 AWG, THWN	120V TO SWITCHES
2	1" RGS	6 EA, 14 AWG, THWN	120V TO JUNCTION BOX
3	1" RGS	1 EA, 18 AWG, TWSP	4-20mA TO LIT
4	1" RGS	1 EA, 18 AWG, TWSP	4-20mA TO FIT
5	1" RGS	2 EA, 18 AWG, TWSP	4-20mA TO JUNCTION BOX
6	1" RGS	2 EA, 18 AWG, TWSP	4-20mA FROM BUILDING
7	1" RGS	6 EA, 14 AWG, THWN	120V FROM BUILDING
8	1" RGS	3EA, 10 AWG, THWN W/ 10 AWG GND	480 V FROM BUILDING
9	1" RGS	3EA, 10 AWG, XHHW W/ 10 AWG GND	480 V TO PUMP
10	1" RGS	2EA, 18 AWG, TWSP 6EA, 16 AWG, (24 VDC)	VFD TO PLC CONTROL

3  
E-3 E-5  
CONDUIT SCHEDULE

NOTES:

1. ALL ELECTRICAL EQUIPMENT INSTALLED WILL MATCH EXISTING SYSTEM AIC RATING.
2. SEE DRAWING E-2 FOR APPROXIMATE DISTANCES OF CONDUIT RUNS.



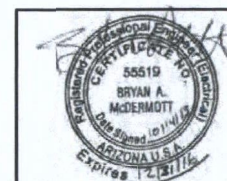
NEW PILOT LIGHT AND SWITCH LOCATION. FIELD FIT LOCATION

PANEL LAYOUT

PANEL REPLACED AS PART OF UPGRADE WORK DETAILED IN THE PHOENIX-GOODYEAR AIRPORT INSTRUMENTATION AND CONTROLS UPGRADES TO SOUTHERN SUBUNIT C AND SUBUNIT A AIR STRIPPER TREATMENT SYSTEMS AS-BUILT DRAWING SET DATED 1/22/2015.

BLUE STAKE NOTE

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



REV	DATE	DESCRIPTION	DRAWN BY	DRAFT	CHK	PROJ	LEAD
4	01/22/2015	AS-BUILT	NS	ERV	ERV	TJS	
3	11/11/13	ADDENDUM 1	ERV	TJH	TJH	BAM	
2	10/01/13	ISSUED FOR BID	JGR	ERV	TJH	BAM	
1	07/11/13	100% SITE DESIGN	JGR	ERV	TJH	BAM	
0	06/18/13	90% SITE DESIGN	TJH	JGR	TJH	TJS	



Los Alamos Technical Associates, Inc.  
756 Park Meadow Road  
Westerville, OH 43081

(614) 508-1200 (Phone)  
www.lata.com

PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

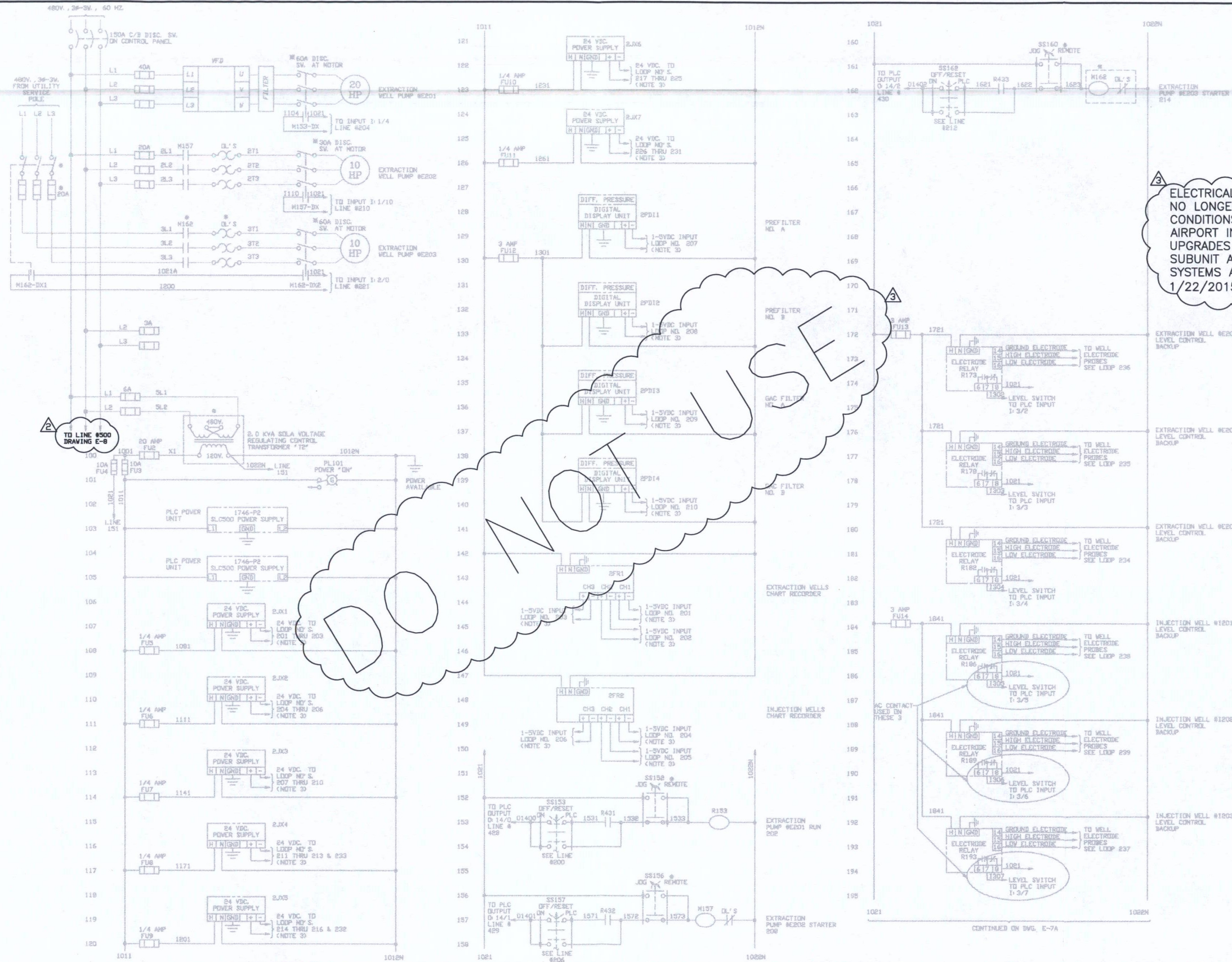
ONE LINE DIAGRAM AND  
ELECTRICAL DETAILS

PROJECT NO.:	11168.005.04
DATE:	06/05/13
DESIGNED BY:	TJH
DATE:	06/07/13
DRAWN BY:	JGR
DATE:	06/10/13
CHECKED BY:	TJS

E-5

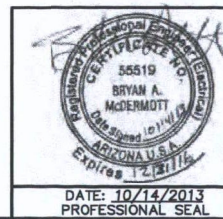
SHEET 19 OF 23





△ ELECTRICAL SCHEMATICS E-6 THROUGH E-9 NO LONGER VALID. FOR AS-BUILT CONDITIONS SEE PHOENIX-GOODYEAR AIRPORT INSTRUMENTATION AND CONTROLS UPGRADES TO SOUTHERN SUBUNIT C AND SUBUNIT A AIR STRIPPER TREATMENT SYSTEMS AS-BUILT DRAWING SET DATED 1/22/2015.

NOTE: BOLD REPRESENTS WORK INCLUDED IN THIS CONTRACT.  
GREY REPRESENTS EXISTING ITEMS FROM HWH/SHARP AS-BUILTS.



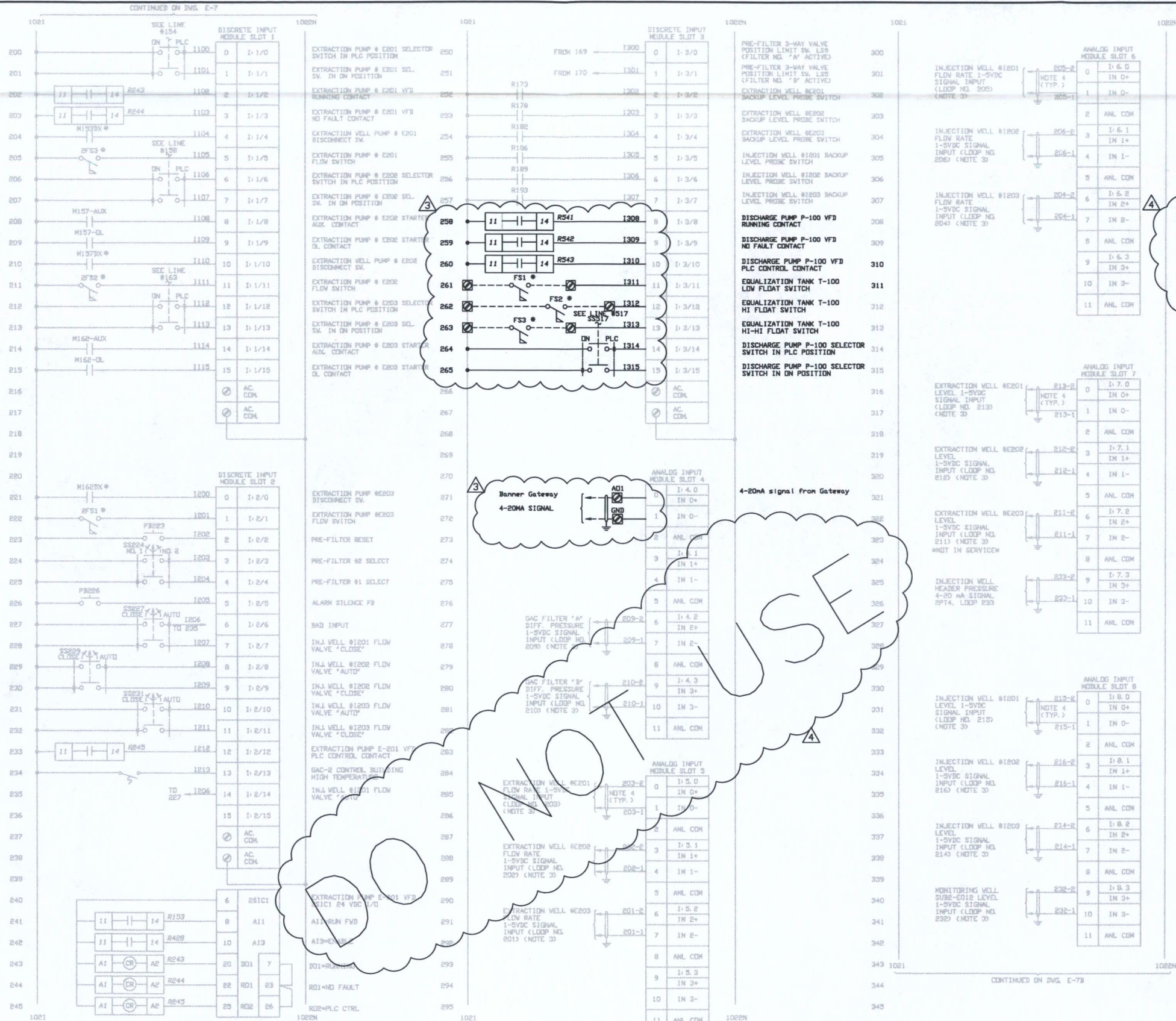
REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJ. LEAD	ENGR.
1	01/22/2015	AS-BUILT	NS	ERV	ERV	TJS
2	10/01/13	ISSUED FOR BID	JGR	ERV	TJH	BAM
3	07/11/13	100% SITE DESIGN	JGR	ERV	TJH	BAM
4	06/07/13	90% SITE DESIGN	TJH	JGR	TJH	TJS

**LATA**  
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www.lata.com  
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756 Park Meadow Road  
Westerville, OH 43081

PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE  
**ELECTRICAL SCHEMATIC  
SHEET 1**

PROJECT NO:	11168.005.04
CADD DWG FILE:	E-6 ELECSCHMATIC1
DESIGNED BY:	TJH
DRAWN BY:	JGR
CHECKED BY:	TJS
DATE:	06/05/13
DATE:	06/07/13
DATE:	06/10/13
<b>E-6</b>	
SHEET 20 OF 23	

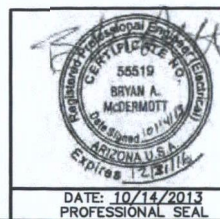




NOTE: BOLD REPRESENTS WORK INCLUDED IN THIS CONTRACT. GREY REPRESENTS EXISTING ITEMS FROM HWH/SHARP AS-BUILTS.

#### BLUE STAKE NOTE

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100



REV	DATE	DESCRIPTION	BY	CHK	ENG
1	01/22/2015	AS-BUILT	NS	ERV	ERV
2	08/19/14	ADDITION OF CHANNEL MONITORING EQUIPMENT	RT		
3	10/01/13	ISSUED FOR BID	JGR	ERV	TJH
4	07/11/13	100% SITE DESIGN	JGR	ERV	TJH
5	06/07/13	90% SITE DESIGN	TJH	JGR	TJH



Los Alamos Technical Associates, Inc.  
756 Park Meadow Road  
Westerville, OH 43081

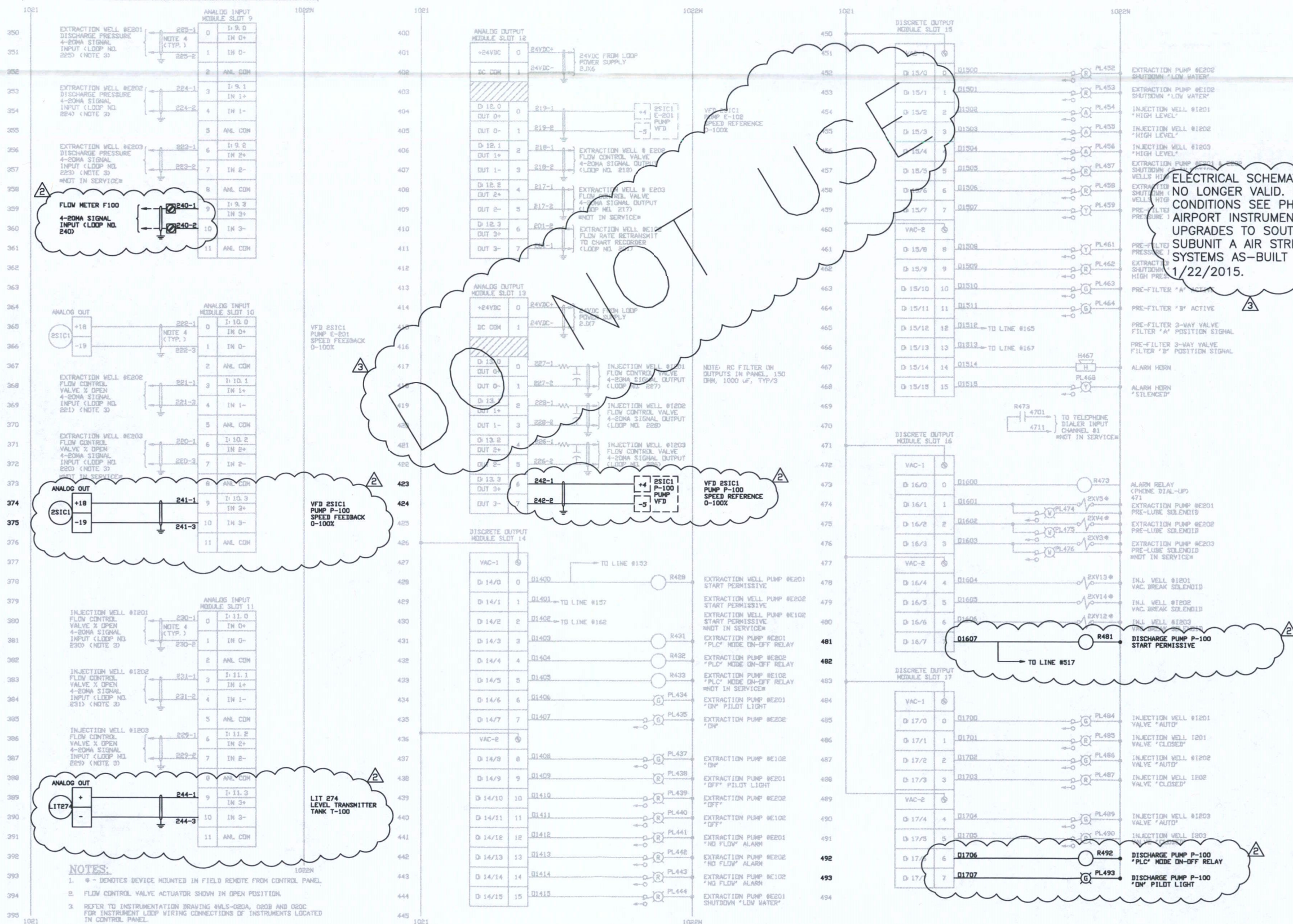
(614) 508-1200 (Phone)  
www.lata.com

PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE

#### ELECTRICAL SCHEMATIC SHEET 2

PROJECT NO:	11168.005.04
CADD FILE:	E-7 ELECSCHMATIC2
DESIGNED BY:	TJH
DRAWN BY:	JGR
CHECKED BY:	TJS
DATE:	06/05/13
DATE:	06/07/13
DATE:	06/10/13
E-7	
SHEET 21 OF 23	

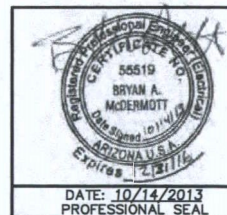




# BLUE STAKE NOTE

ARIZONA BLUE STAKE NOTIFICATION  
REQUIRED TWO FULL WORKING DAYS  
PRIOR TO EXCAVATION  
1-800-782-5348  
IN MARICOPA COUNTY (602) 263-1100

NOTE: BOLD REPRESENTS WORK INCLUDED IN  
THIS CONTRACT. GREY REPRESENTS EXISTING  
ITEMS FROM HWH/SHARP AS-BUILTS.



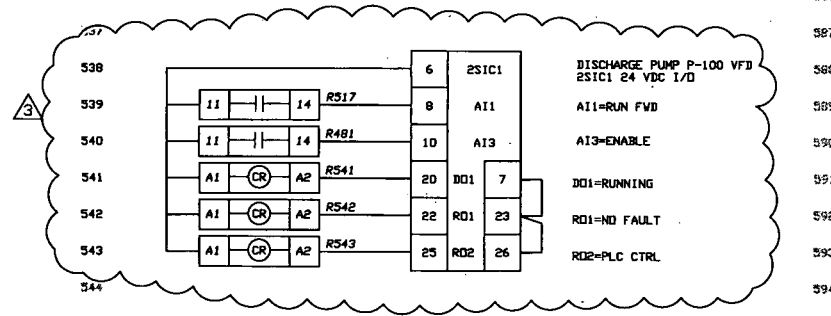
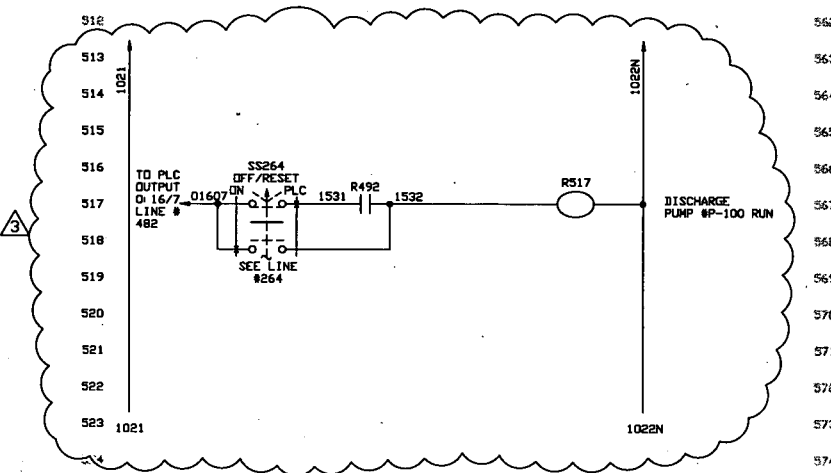
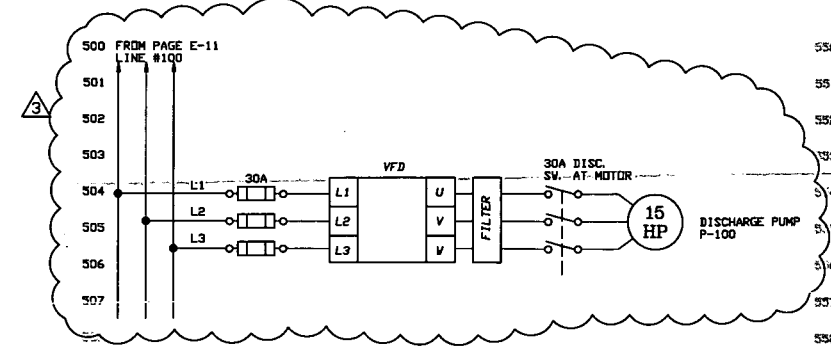
REV	DATE	DESCRIPTION	BY	CHK	ENGR	LEAD
3	01/22/2015	AS-BUILT	NS	ERV	ERV	TJS
2	10/01/13	ISSUED FOR BID	JGR	ERV	TJH	BAM
1	07/11/13	100% SITE DESIGN	JGR	ERV	TJH	BAM
0	06/07/13	90% SITE DESIGN	TJH	JGR	TJH	TJS

**LATA**  
(614) 508-1200 (Phone)  
www.lata.com  
Los Alamos Technical Associates, Inc.  
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Westerville, OH 43081

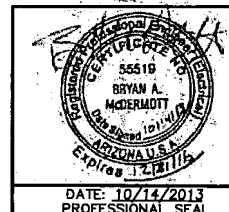
PHOENIX-GOODYEAR AIRPORT  
GOODYEAR, ARIZONA  
SOUTHERN SUBUNIT C PIPELINE  
**ELECTRICAL SCHEMATIC  
SHEET 3**

PROJECT NO.	11168.005.04
CADD DWG FILE	E-8 ELECSCHMATIC3
DESIGNED BY:	TJH
DATE:	06/05/13
DRAWN BY:	JGR
DATE:	06/07/13
CHECKED BY:	TJS
DATE:	06/10/13
<b>E-8</b>	
SHEET 22 OF 23	





**BLUE STAKE NOTE**  
 ARIZONA BLUE STAKE NOTIFICATION  
 REQUIRED TWO FULL WORKING DAYS  
 PRIOR TO EXCAVATION  
 1-800-782-5348  
 IN MARICOPA COUNTY (602) 263-1100



REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	DATE
4	01/22/2015	AS-BUILT	NS	ERV	TJS
3	10/01/13	ISSUED FOR BID	JGR	ERV	TJH
2	07/11/13	100% SITE DESIGN	JGR	ERV	TJH
1	06/18/13	REMOVED REMOTE SWITCH AT LINE 516	TJH	JGR	TJS
0	06/07/13	90% SITE DESIGN	TJH	JGR	TJS

**LTA**  
 Los Alamos Technical Associates, Inc.  
 756 Park Meadow Road  
 Westerville, OH 43081  
 (614) 508-1200 (Phone)  
 www.lata.com

PHOENIX-GOODYEAR AIRPORT  
 GOODYEAR, ARIZONA  
 SOUTHERN SUBUNIT C PIPELINE  
**ELECTRICAL SCHEMATIC  
 SHEET 4**

PROJECT NO:	11168.005.04
CADD DWG FILE:	E-9 ELECSCHMATIC4
DESIGNED BY:	TJH
DRAWN BY:	JGR
CHECKED BY:	TJS
DATE:	06/05/13
DATE:	06/07/13
DATE:	06/10/13
<b>E-9</b>	
SHEET 23 OF 23	

4 ELECTRICAL SCHEMATICS E-6 THROUGH E-9  
 NO LONGER VALID. FOR AS-BUILT  
 CONDITIONS SEE PHOENIX-GOODYEAR  
 AIRPORT INSTRUMENTATION AND CONTROLS  
 UPGRADES TO SOUTHERN SUBUNIT C AND  
 SUBUNIT A AIR STRIPPER TREATMENT  
 SYSTEMS AS-BUILT DRAWING SET DATED  
 1/22/2015.

DO NOT USE

NOTE: BOLD REPRESENTS WORK INCLUDED IN  
 THIS CONTRACT. GREY REPRESENTS EXISTING  
 ITEMS FROM HWH/SHARP AS-BUILTS.

**APPENDIX B**

**Well Permit**



Arizona Department of Water Resources  
Information Management Unit  
P.O. Box 33589 Phoenix, Arizona 85067-3589  
(602) 771-8627 • (800) 352-8488  
www.azwater.gov

# Well Driller Report and Well Log

MAY 15 2014

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK.

FILE NUMBER

**B (01-01) 09CAB**

WELL REGISTRATION NUMBER

**55 - 223087**

PERMIT NUMBER (IF ISSUED)

**T-223087**

## SECTION 1. DRILLING AUTHORIZATION

### Drilling Firm

Mail To:

NAME

**YELLOW JACKET DRILLING LLC**

DWR LICENSE NUMBER

**78**

**PO BOX 801**

TELEPHONE NUMBER

**602-453-3252**

CITY / STATE / ZIP

**GILBERT, AZ 85299-0801**

FAX

## SECTION 2. REGISTRY INFORMATION

### Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL

**Goodyear Tire & Rubber Company**

MAILING ADDRESS

**200 INNOVATION WAY**

CITY / STATE / ZIP CODE

**AKRON, OH 44316**

### Location of Well

WELL LOCATION ADDRESS (IF ANY)

**S. Bullard Ave + W. Yuma Rd, Goodyear, AZ**

TOWNSHIP  
(N/S)

**1N**

RANGE  
(E/W)

**1W**

SECTION

**09**

160 ACRE

**C**

**1/4**

40 ACRE

**A**

**1/4**

10 ACRE

**B**

**1/4**

LATITUDE

**33**

Degrees

**26**

Minutes

**28**

Seconds

**"N**

LONGITUDE

**112**

Degrees

**22**

Minutes

**09**

Seconds

**"W**

CONTACT PERSON NAME AND TITLE

**JEFFREY SUSSMAN**

TELEPHONE NUMBER

**330-796-0578**

FAX

METHOD OF LATITUDE/LONGITUDE (CHECK ONE)

☒ \*GPS: Hand-Held ☒ \*GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL

Feet Above Sea Level

WELL NAME (e.g., MW-1, PZ-3, Lot 25 Well, Smith Well, etc.)

METHOD OF ELEVATION (CHECK ONE)

☒ \*GPS: Hand-Held ☒ \*GPS: Survey-Grade

\*GEOGRAPHIC COORDINATE DATUM (CHECK ONE)

☒ NAD-83 ☒ Other (please specify):

COUNTY

**Maricopa**

ASSESSOR'S PARCEL ID NUMBER

BOOK

**500**

MAP

**04**

PARCEL

**018W**

## SECTION 3. WELL CONSTRUCTION DETAILS

### Drill Method

CHECK ALL THAT APPLY

- ☒ Air Rotary  
☒ Bored or Augered  
☒ Cable Tool  
☒ Dual Rotary  
☒ Mud Rotary  
☒ Reverse Circulation  
☒ Driven  
☒ Jetted  
☒ Air Percussion / Odex Tubing  
☒ Other (please specify):

### Method of Well Development

CHECK ALL THAT APPLY

- ☒ Airlift  
☒ Bail  
☒ Surge Block  
☒ Surge Pump  
☒ Other (please specify):

### Method of Sealing at Reduction Points

CHECK ONE

- ☒ None  
☒ Packed  
☒ Swedged  
☒ Welded  
☒ Other (please specify):

### Condition of Well

CHECK ONE

- ☒ Capped  
☒ Pump Installed

### Construction Dates

DATE WELL CONSTRUCTION STARTED

**4/11/14**

DATE WELL CONSTRUCTION COMPLETED

**4/24/14**

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY

**R. L. Lane**

DATE

**5/10/14**



55-223087

**SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT)** (attach additional page if needed)

Depth		
DEPTH OF BORING	315	Feet Below Land Surface
DEPTH OF COMPLETED WELL	310	Feet Below Land Surface

**Water Level Information**

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
Feet Below Land Surface			<input checked="" type="checkbox"/> Valve <input checked="" type="checkbox"/> Other:

Borehole			Installed Casing													
DEPTH FROM SURFACE		BOREHOLE DIAMETER (inches)	DEPTH FROM SURFACE		OUTER DIAMETER (inches)	MATERIAL TYPE ( T )				PERFORATION TYPE ( T )					SLOT SIZE IF ANY (inches)	
FROM (feet)	TO (feet)		FROM (feet)	TO (feet)		STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED		IF OTHER TYPE, DESCRIBE
0	20		0	20	24	✓				✓						
20	315	18	0	210	12	✓				✓						
			210	300	12	✓								✓		.050
			300	310	12	✓				✓						

Installed Annular Material												
DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)							FILTER PACK			SIZE
FROM (feet)	TO (feet)	NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE			SAND	GRAVEL	
0	180				✓							
180	200					✓						
200	205									✓		#60
205	315									✓		10/20

## Well Driller Report and Well Log

WELL REGISTRATION NUMBER

**55 - 223087**

## SECTION 5. GEOLOGIC LOG OF WELL

[illegible]

## SECTION 6. WELL SITE PLAN

NAME OF WELL OWNER

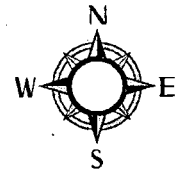
COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK

MAP

PARCEL

- ❖ Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- ❖ Please indicate the distance between the well location and any septic tank system or sewer system.



1" = \_\_\_\_\_ ft



Run Date: 04/15/2014

# AZ DEPARTMENT OF WATER RESOURCES

## WELL REGISTRY REPORT - WELLS55

Location B 1.0 1.0 9 C A B Well Reg.No 55 - 223087 AMA PHOENIX AMA

Registered Name GOODYEAR TIRE & RUBBER COMPANY  
1144 E MARKET ST, DEPT 110F  
ATTN: JEFF SUSSMAN, REMEDIATION MGR  
AKRON OH 44316

File Type NEW WELLS (INTENTS OR APPLICATIONS)  
Application/Issue Date 04/11/2014

Owner OWNER  
Driller No. 78  
Driller Name YELLOW JACKET DRILLING SERVICES, LLC  
Driller Phone 602-453-3252  
County MARICOPA  
Parcel No. 500-04-018W  
Intended Capacity GPM 450.00

Well Type NON-SERVICE  
SubBasin WEST SALT RIVER VALLEY  
Watershed AGUA FRIA RIVER  
Registered Water Uses  
Registered Well Uses  
Discharge Method NO DISCHARGE METHOD LISTED  
Power NO POWER CODE LISTED

Well Depth	0.00	Case Diam	0.00	Tested Cap	0.00
Pump Cap.	0.00	Case Depth	0.00	CRT	
Draw Down	0.00	Water Level	0.00	Log	
		Acres Irrig	0.00	Finish	NO CASING CODE LISTED

Contamination Site: YES - WITHIN 1 MILE OF A WQARF SITE

Tribe: Not in a tribal zone

Comments CERCLA EXEMPTION

### Current Action

4/8/2014 600 PERMIT ISSUED (S, T, 59)  
Action Comment: cp

### Action History

4/11/2014 555 DRILLER & OWNER PACKETS MAILED  
Action Comment: cp  
4/8/2014 550 DRILLING AUTHORITY ISSUED  
Action Comment: cp  
3/25/2014 867 APP/NOI REVIEW BY HYDRO/WQARF COMPLETE  
Action Comment: dgc  
3/6/2014 365 APP SENT TO HYDROLOGY FOR REVIEW  
Action Comment: cp  
3/5/2014 300 APP RCVD FOR A WELL PERMIT FOR A NEW WELL (S, T)  
Action Comment: CP



**ARIZONA DEPARTMENT OF WATER RESOURCES**

**NON-EXEMPT WELL PERMIT**

**PURSUANT TO A.R.S. §§ 45-598 AND 45-599**

PERMIT NO. T-223087

STATE OF ARIZONA                     )  
  ) ss.  
COUNTY OF MARICOPA             )

This is to certify that Application No. T-223087 meets the requirements of A.R.S. §§ 45-598 and 45-599 for the construction of a new well. The Director hereby grants authority to the Permittee to construct and operate a non-exempt well, subject to the following limitations and conditions:

**Permit Limitations**

Permittee:	Goodyear Tire & Rubber Company 200 Innovation Way Akron, OH 44316
Well Registration Number:	55-223087                     File No. B(01-01)9CAB
Active Management Area:	Phoenix
Sub-basin:	West Salt River Valley
Well Location:	The NW ¼ of the NE ¼ of the SW ¼ of Section 09, Township 01 North, Range 01 West of the GSRB&M
Depth:	310 ft.
Casing Material:	SCS
Casing Diameter:	12 inches

PERMIT NO. T-223087

Maximum Pumping Capacity: 450 gallons per minute

Maximum Annual Volume: 726 acre-feet

Authorized Place of Use for  
Groundwater Withdrawn: As Authorized by CERCLA EXEMPTION

Authorized Use of Groundwater: As Authorized by CERCLA EXEMPTION

**Permit Conditions**

1. This permit is issued pursuant to A.R.S. § 45-599 and authorizes the permittee to withdraw groundwater for the use or uses set forth in the permit. This permit does not authorize the permittee to withdraw surface water from the well. If the permittee withdraws surface water from the well in any year, the permittee shall do so only pursuant to a decreed or appropriative surface water right and shall separately report in the annual report filed pursuant to A.R.S. § 45-632 the amount of groundwater and surface water withdrawn from the well.
2. The permittee shall monitor withdrawals of groundwater and shall report the total amount of groundwater withdrawn on an Annual Water Withdrawal and Use Report. The first annual reporting period shall be from the date of issuance of this permit through December 31, 2014. Subsequent annual reporting periods shall be from January 1 through December 31.
3. The issuance of the permit does not waive any federal, state, county or local government ordinances, regulations or permits for which the facility may have to comply.

WITNESS my hand and seal of office this 8th day  
of April, 2014



Michael Johnson  
Assistant Director

Run Date: 04/11/2014

## AZ DEPARTMENT OF WATER RESOURCES

### WELL REGISTRY REPORT - WELLS55

Location B 1.0 1.0 9 C A B Well Reg.No 55 - 223087 AMA PHOENIX AMA

Registered Name GOODYEAR TIRE & RUBBER COMPANY  
1144 E MARKET ST, DEPT 110F  
ATTN: JEFF SUSSMAN, REMEDIATION MGR  
AKRON OH 44316

File Type NEW WELLS (INTENTS OR APPLICATIONS)  
Application/Issue Date 04/11/2014

Owner OWNER  
Driller No. 78  
Driller Name YELLOW JACKET DRILLING SERVICES, LLC  
Driller Phone 602-453-3252  
County MARICOPA  
Parcel No. 500-04-018W  
Intended Capacity GPM 450.00

Well Type NON-SERVICE  
SubBasin WEST SALT RIVER VALLEY  
Watershed AGUA FRIA RIVER  
Registered Water Uses  
Registered Well Uses  
Discharge Method NO DISCHARGE METHOD LISTED  
Power NO POWER CODE LISTED

Well Depth	0.00	Case Diam	0.00	Tested Cap	0.00
Pump Cap.	0.00	Case Depth	0.00	CRT	
Draw Down	0.00	Water Level	0.00	Log	
		Acres Irrig	0.00	Finish	NO CASING CODE LISTED

Contamination Site: YES - WITHIN 1 MILE OF A WQARF SITE

Tribe: Not in a tribal zone

Comments

#### Current Action

4/11/2014 555 DRILLER & OWNER PACKETS MAILED  
Action Comment: cp

#### Action History

4/8/2014 550 DRILLING AUTHORITY ISSUED  
Action Comment: cp  
3/25/2014 867 APP/NOI REVIEW BY HYDRO/WQARF COMPLETE  
Action Comment: dgc  
3/6/2014 365 APP SENT TO HYDROLOGY FOR REVIEW  
Action Comment: cp  
3/5/2014 300 APP RCVD FOR A WELL PERMIT FOR A NEW WELL (S, T)  
Action Comment: CP



**Cynthia A. Pogue**

---

**From:** David G. Christiana  
**Sent:** Friday, April 11, 2014 6:58 AM  
**To:** Cynthia A. Pogue  
**Subject:** Re: Goodyear 55-223087 T-223087

I can get the actual reference of US code. Yes, CERCLA is the authority. I wish we had them on Poor Quality permits, but mgt said no.

Dave

Sent from my iPad

On Apr 11, 2014, at 6:45, "Cynthia A. Pogue" <[capogue@azwater.gov](mailto:capogue@azwater.gov)> wrote:

I reviewed the application to verify the info. There is no IGR, Permit, Service/Irrigation withdrawal authority.

Do I just put "CERCLA EXEMPTION" on the permit as the withdrawal authority?

---

**From:** David G. Christiana  
**Sent:** Thursday, April 10, 2014 2:33 PM  
**To:** Cynthia A. Pogue  
**Subject:** Goodyear 55-223087 T-223087

Hi Cindy,

What is the status of the permit for T-223087? I have been receiving phone calls about it.

Dave

**David Christiana, R.G.**  
Permitting and Adjudication Support  
Arizona Department of Water Resources  
602.771.8548

April is Water Awareness Month

<image001.png>

JANICE K. BREWER  
Governor



MICHAEL J. LACEY  
Interim Director

ARIZONA DEPARTMENT of WATER RESOURCES  
3550 North Central Avenue, Second Floor  
Phoenix, Arizona 85012-2105  
602.771.8500  
azwater.gov

April 8, 2014

Goodyear Tire & Rubber Company  
200 Innovation Way  
Akron, OH 44316

RE: Non-Exempt, Non-Service Area Well Permit No. T-223087  
Well Registration No. 55-223087 B(01-01) 09CAB

Dear Permittee:

Your permit to drill and operate of the above-referenced non-exempt well is enclosed. The well owner is required to submit the enclosed Completion Report within 30 days of the installation of pump equipment. A drill card has been sent to your driller.

Pursuant to the provisions of A.R.S. § 45-604, any person withdrawing groundwater from a well is required to use a water measuring device to record rates of withdrawal in order to provide or allow the computation of an annual volume of pumpage from the well. The total volume of pumpage from the well shall be reported on your Annual Water Withdrawal and Use Report for this calendar year. Subsequent annual reporting periods shall be from January 1 through December 31.

The Department has issued the authorization to drill and operate this well pursuant to A.R.S. §§ 45-598 and 45-599 of the Groundwater Code. The legal nature of the water withdrawn from the well may be the subject of court action in the future as part of a determination of surface water rights in your area. If there are court proceedings that could affect your well, you will be notified and be given the opportunity to participate.

Under A.R.S. § 45-593, the person to whom a well is registered must notify the Department of a change in ownership, physical characteristics or any other data about the well in order to keep the well registration records current and accurate. Forms may be obtained by contacting your local AMA office or online at <http://www.azwater.gov>.

Your permit has been issued by this Department without a hearing. As such, it is an appealable agency action. You are entitled to appeal and your rights are described in the enclosed notice of right to appeal.

If you have any questions regarding your permit, please call me at 602-771-8614.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Cynthia Pogue', written in dark ink.

Cynthia Pogue – WRS  
Groundwater Permitting and Wells Section

Enclosures

ARIZONA DEPARTMENT OF WATER RESOURCES  
WATER MANAGEMENT DIVISION  
3550 North Central Avenue  
Phoenix, Arizona 85012

THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILL OPERATIONS

WELL REGISTRATION NO.: 55-223087

PERMIT: T-223087

AUTHORIZED DRILLER: YELLOW JACKET DRILLING SERVICE

LICENSE NO.: 78

AUTHORITY TO DRILL ONE WELL INSIDE THE PHOENIX ACTIVE MANAGEMENT AREA HAS BEEN GRANTED TO:

WELL OWNER: GOODYEAR TIRE & RUBBER COMPANY, 200 INNOVATION WAY, AKRON, OH 44316

WELL IS TO BE LOCATED IN: NW ¼ OF THE NE ¼ OF THE SW ¼ OF SECTION 09, TOWNSHIP 01 NORTH, RANGE 01 WEST  
OF THE GSRB&M

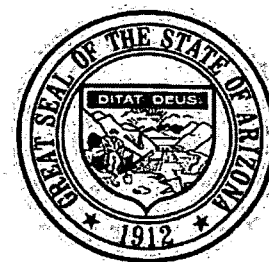
NO. OF WELLS IN THIS PROJECT: 1 (ONE)

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 7TH DAY OF APRIL 2015

*Steve Merrill*

WATER MANAGEMENT

THE DRILLER MUST FILE LOGS OF THE WELLS  
WITHIN 30 DAYS OF COMPLETION OF DRILLING



*2015*



PERMIT NO. T-223087

Maximum Pumping Capacity: 450 gallons per minute

Maximum Annual Volume: 726 acre-feet

Authorized Place of Use for  
Groundwater Withdrawn: As Authorized by 56-000001.0000

Authorized Use of Groundwater: As Authorized by 56-000001.0000

Permit Conditions

1. This permit is issued pursuant to A.R.S. § 45-599 and authorizes the permittee to withdraw groundwater for the use or uses set forth in the permit. This permit does not authorize the permittee to withdraw surface water from the well. If the permittee withdraws surface water from the well in any year, the permittee shall do so only pursuant to a decreed or appropriative surface water right and shall separately report in the annual report filed pursuant to A.R.S. § 45-632 the amount of groundwater and surface water withdrawn from the well.
2. The permittee shall monitor withdrawals of groundwater and shall report the total amount of groundwater withdrawn on an Annual Water Withdrawal and Use Report. The first annual reporting period shall be from the date of issuance of this permit through December 31, 2014. Subsequent annual reporting periods shall be from January 1 through December 31.
3. The issuance of the permit does not waive any federal, state, county or local government ordinances, regulations or permits for which the facility may have to comply.

WITNESS my hand and seal of office this 8th day  
of April, 2014

  
Michael Johnson  
Assistant Director



**ARIZONA DEPARTMENT OF WATER RESOURCES**

**NON-EXEMPT WELL PERMIT**

**PURSUANT TO A.R.S. §§ 45-598 AND 45-599**

PERMIT NO. T-223087

STATE OF ARIZONA

)  
) ss.

COUNTY OF MARICOPA

)

This is to certify that Application No. T-223087 meets the requirements of A.R.S. §§ 45-598 and 45-599 for the construction of a new well. The Director hereby grants authority to the Permittee to construct and operate a non-exempt well, subject to the following limitations and conditions:

**Permit Limitations**

Permittee:

Goodyear Tire & Rubber Company  
200 Innovation Way  
Akron, OH 44316

Well Registration Number:

55-223087

File No. B(01-01)9CAB

Active Management Area:

Phoenix

Sub-basin:

West Salt River Valley

Well Location:

The NW ¼ of the NE ¼ of the SW ¼ of Section 09, Township 01 North, Range 01 West of the GSRB&M

Depth:

310 ft.

Casing Material:

SCS

Casing Diameter:

12 inches

**IPR SUMMARY REVIEW SHEET**

*Prepared by C Pogue, March 25, 2014*

223087

**APPLICANT:**

**Goodyear Tire & Rubber Company**

**APPLICATION TYPE:**

**T-223087 -Well 55-223098 B(01-01) 09CAB**

**Drill/Operate Non-Exempt, Non-Service Area**

**Well A.R.S. § 45-599**

**Summary of the facts:** Goodyear Tire & Rubber Company filed an *Application for a Permit to Drill/Operate a Non-Exempt Well* on March 5, 2014. The claim of entitlement to withdraw groundwater is based upon CERCLA Exemption, Extraction Well for Remediation. The proposed annual volume requested is 726 acre-feet with a pumping capacity of 450 gpm. The location is owned by Kohnen Investments LLP and a signed lease agreement between Kohnen Investments LLP and Goodyear Tire & Rubber Co. for the well/land is attached.

Water Quality/Hydrology review indicates that since the withdrawal are for remediation, a well impact analysis is not necessary. The proposed well does not lie within a known area of regional land subsidence. The proposed well is within the buffer of the Phoenix Greater Airport South CERCLA site, administered by the EPA. The proposed well is not within a mile of any FRSS. Consultation with the Maricopa County Flood Control District is not necessary. Water Quality/Hydrology supports the issuance of this permit.

**Recommendations:**

Request approval of application T223087 to permit well 55-223098 B(01-01) 09CAB as a non-exempt, non-service area well with the annual pumping volume of 726 acre-feet with a pumping capacity of 450 gpm pursuant of A.R.S. § 45-599.

**IPR Committee Recommendations:**

☒ Approved

☐ Denied

☐ Other (explanation) \_\_\_\_\_

  
IPR Chairperson

4/8/14  
Date

# Memorandum



To: Cindy Pogue, Groundwater Permitting and Wells  
From: David Christiana, Permitting and Adjudication Support *AK*  
CC: Jeff Tannler, Statewide AMA Director  
Date: 03/25/2014  
Re: **Application for a Permit to Drill or Operate a Non-Exempt Well  
T-223087 B(1-1)9CAB  
Goodyear Tire & Rubber Company**

**Comments:** I have reviewed the above-referenced application for a permit to drill and operate a non-exempt well in the Phoenix AMA for well impacts, potential regional subsidence, water quality issues, well construction, and proximity to a Maricopa County Flood Retention Structure (FRS). The applicant proposes to construct a well and withdraw 726 acre-feet pursuant to a remediation at the Phoenix Goodyear Airport South CERCLA site. The applicant claims a CERCLA exemption from permitting requirements. This permit will effectively be in lieu of a poor quality groundwater withdrawal permit.

## **Well Impacts**

Since the withdrawals are for remediation, a well impact analysis is not necessary.

## **Potential Regional Subsidence**

The proposed well does not lie within a known area of regional land subsidence. No additional subsidence monitoring is necessary.

## **Water Quality**

The proposed well is within the buffer of the Phoenix Goodyear Airport South CERCLA site, administered by the US Environmental Protection Agency. No other known water quality issues exist.





# Memorandum

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## **Well Construction**

The proposed well will be drilled to 310 feet below land surface, with 12 inch blank casing to 210 feet, stainless steel louvered screen from 210 to 310 feet. A surface seal will extend to 20 feet. The preliminary well design figure included with the application indicates the proposed construction meets minimum well construction requirements. No special well construction is necessary.

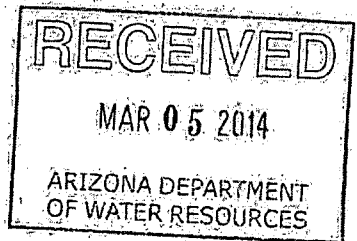
## **Proximity to Flood Retention Structures**

The proposed well is not within a mile of any FRSs. Consultation with the Maricopa County Flood Control District is not necessary.

## **Conclusion**

I support issuing this permit to drill and operate a non-exempt well at the proposed location, with a withdrawal volume of 726 acre-feet per year.

STATE OF ARIZONA  
DEPARTMENT OF WATER RESOURCES  
WATER MANAGEMENT DIVISION  
MAIL TO: P.O. BOX 36020, PHOENIX, ARIZONA 85067-6020  
3550 North Central Avenue, Phoenix, Arizona 85012  
Phone (602) 771-8500 • Fax (602) 771-8690



APPLICATION FOR A PERMIT TO DRILL OR OPERATE A NON-EXEMPT  
WELL WITHIN AN ACTIVE MANAGEMENT AREA PURSUANT TO A.R.S. § 45-599

I. INSTRUCTIONS:

- This application should be used to obtain a permit to:  
(a) Drill a non-exempt well in conjunction with a new or existing General Industrial Use Permit Application, a Certificate of Grandfathered Right, a Service Area Right, or an Irrigation District Right.  
(b) Convert an existing well to a non-exempt well, or increase the annual permitted volume to be withdrawn from the well.
- Complete all appropriate items on this application, sign in the appropriate place and mail to P.O. Box 33589, Phoenix, Arizona 85067-3589 or hand deliver to 3550 North Central Avenue, Phoenix, Arizona 85012
- Pursuant to A.R.S. § 45-599 and A.A.C. R12-15-104, the fee for this application is \$150.00 and the permit fee is \$30.00.

II. GENERAL DATA:

FOR DEPARTMENT USE ONLY

Application No. T 223087

Registration No. 55-223087

File No. B(1-1) 9 CAB

Date Received 3/5/14

AMA PHX

W/S Agua Fria River W SRV

Adm: 4-4-14  
Sub 6-3-14  
CP

1. Applicant The Goodyear Tire & Rubber Company  
Mailing Address 200 Innovation Way  
Akron OH 44316  
City State Zip Code  
Contact Person Jeffrey Sussman, Remediation Manager  
Telephone Number 330-796-0578

2B. Parcel No: 500-04-018W  
2C. Public Water System ID # N/A  
Paradise Valley AZ 85253 602-768-6716  
City State Zip Telephone Number

3. Applicant is: ☐ Owner ☒ Lessee
4. Proposed well is: ☒ New well ☐ Increase in Permitted Maximum Annual Volume for Existing Well ☐ Replacement well in a new location.
5. Claim of entitlement to withdraw groundwater is based upon:

- ☐ Certificate of Grandfathered Right No: \_\_\_\_\_  
☐ General Industrial Use Permit No. 59: \_\_\_\_\_  
☐ Service Area Right No: \_\_\_\_\_  
☐ Irrigation District Right No: \_\_\_\_\_

\*\*OTHER - CERCLA EXEMPTION, EXTRACTION WELL FOR REMEDIATION

6. The principal use(s) of groundwater will be (be specific) Impacted groundwater will be extracted for treatment
7. Well location: NW 1/4 NE 1/4 SW 1/4 Section 09 Township 1N N/S Range 1W E/W  
10 Acre 40 Acre 160 Acre
8. Position location of the well: Latitude 33 ° 26 ' 28 " N Longitude 112 ° 22 ' 09 " W
9. Design Pump Capacity 450 gpm Depth 310 feet  
Diameter 12 inches Type of casing LCS casing, SS screen
10. Proposed annual volume of water ~726 acre feet
11. Well is located in the West Salt River Valley subbasin of the Phoenix Active Management Area.

12. Approximate date construction will begin: MONTH March YEAR 2014

Estimated time to complete new well 3 weeks. (If longer than 1 year, attach explanation.)

13. Legal description of the land where the groundwater will be used: N/A - extraction well for remediation  
 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 Section \_\_\_\_\_ Township \_\_\_\_\_ N/S Range \_\_\_\_\_ E/W. County \_\_\_\_\_  
 10 Acre 40 Acre 160 Acre

14. Is the proposed well site within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility or storage area of hazardous materials? ☐ Yes ☒ No (if yes, a request for a variance must accompany this application pursuant to R12-15-820.)

15. Driller's Name Yellow Jacket Drilling Services DWR License No: 78 ROC License Category C-53 & A-4

Mailing Address:	PO Box 801	Gilbert	AZ	85299-0801	602-453-3252
	Street	City	State	Zip	Telephone Number

**16. Attach a Well Construction Supplement, DWR form 55-90, and include a detailed construction diagram as indicated on the form.**

### III. FOR SERVICE AREA WELLS AND IRRIGATION DISTRICT WELLS ONLY:

17. Is the proposed well located in your service area? ☐ Yes ☐ No

18. Will groundwater withdrawn be used in your service area? ☐ Yes ☐ No (If answer is no, attach explanation.)

**IV. FOR REPLACEMENT WELL IN NEW LOCATION ONLY:**

19. Registration number of original well 55- \_\_\_\_\_

20. Location of the original well: \_\_\_\_\_<sup>1</sup>/<sub>4</sub> \_\_\_\_\_<sup>1</sup>/<sub>4</sub> \_\_\_\_\_<sup>1</sup>/<sub>4</sub> Section \_\_\_\_\_ Township \_\_\_\_\_ N/S Range \_\_\_\_\_ E/W  
10 Acre 40 Acre 160 Acre

21. Distance between original well and proposed replacement well \_\_\_\_\_ feet.

22. When determining impacts under the Department's well spacing rules, the director will take into account the collective efforts of reducing or terminating withdrawals from the well being replaced combined with the proposed withdrawals from the replacement well if the applicant submits a hydrological study demonstrating those collective effects to the satisfaction of the director.  
Will a hydrological study be submitted? ☐ Yes ☐ No

23. Will the original well be abandoned if applicant receives a permit to drill a replacement well? ☐ Yes ☐ No.  
(If yes, please submit a completed Notice of Intent to Abandon a Well along with this application.)  
If no, explain the planned use of the original well \_\_\_\_\_

**V. FOR INCREASE IN PERMITTED MAXIMUM VOLUME FOR EXISTING WELL ONLY:**

24. Registration number of the existing well 55-\_\_\_\_\_ Present pump design capacity \_\_\_\_\_ gallons per minute. Present permitted volume \_\_\_\_\_ acre-feet per year.

25. The new design pump capacity will be \_\_\_\_\_ gallons per minute. New permitted volume will be \_\_\_\_\_ acre-feet per year.

26. Will the well be modified or deepened? ☐ Yes ☐ No [Pursuant to R12-15-801(29)] If yes, Attach a Well Construction Supplement, DWR form 55-90, and include a detailed construction diagram as indicated on the form.

27. The existing well has previously been used in conjunction with or for the following: \_\_\_\_\_

It is understood that the permit, if granted, will be in accordance with the Groundwater Management Act (Title 45, Chapter 2), and the rules adopted thereunder. The permittee will be bound by the provisions of such law and the provisions of the permit issued.

I (we), Dennis McGavis hereby affirm that all information provided in this application is true and correct to the best of my/our  
(print name) knowledge and belief.

Signature of Applicant Dennis E. McGowan Date 3/4/14

Signature of Land Owner (if applicable) \_\_\_\_\_ Date \_\_\_\_\_

10. Is the proposed wellsite within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility, storage area of hazardous material, or petroleum storage area or tank? \_\_\_\_ Yes   x   No

11. Is this well to monitor existing contamination?   x   Yes \_\_\_\_ No

Potential contamination? \_\_\_\_ Yes \_\_\_\_ No If yes, please provide explanation: \_\_\_\_\_

12. Name of Consulting firm, if any: Haley & Aldrich

400 E Van Buren St, Ste 545

Phoenix

AZ

85004

Address

City

State

Zip

Contact Person: Pejman Eshraghi

Telephone Number: 602-760-2420

13. Drilling firm Yellow Jacket Drilling Services

DWR License Number: 78

ROC License Category: C-53 & A-4

14. Special construction standards, if any, required pursuant to A.A.C. R12-15-821: \_\_\_\_\_

I (we), Dennis McGavis  
(print name)

hereby affirm that all information provided in this application is true and correct to the best of my/our knowledge and belief.

Signature of Applicant

Dennis S. McGavis

Date

3/4/14



# ARIZONA DEPARTMENT OF WATER RESOURCES

## WATER MANAGEMENT DIVISION

3550 North Central Avenue, Phoenix, Arizona 85012

Phone (602) 771-8585 Fax (602) 771-8688

### WELL CONSTRUCTION SUPPLEMENT (form DWR 55-90)

Well Registration Number 55- 223087

1. Well Location:

NW 1/4 of the NE 1/4 of the SW 1/4, Sec. 9, Township 1N Range 1W  
10AC 40AC 160AC

2. Position Location of the Well:

Latitude 33° 26' 28" Longitude 112° 22' 09"

Datum: NAD 83 • NAD 27 • Other: \_\_\_\_\_

3. County Maricopa

4. Date construction to start: March 2014

5. Time period well will remain in use: 20 years

6. Is pump equipment to be installed? Y If so, design pump capacity: 500 GPM.

7. Well construction plan:

a. Drilling method (mud rotary, hollow-stem auger, etc.) dual rotary

b. Borehole diameters 18 1/2 inches from 0 feet to 325 feet.

\_\_\_\_\_ inches from \_\_\_\_\_ feet to \_\_\_\_\_ feet.

c. Casing materials 12-inch nominal diameter SS louver screen, 12-inch nominal diameter LCS casing

d. Method of well development (bail, air lift, surge, etc.) bail, surge, pump

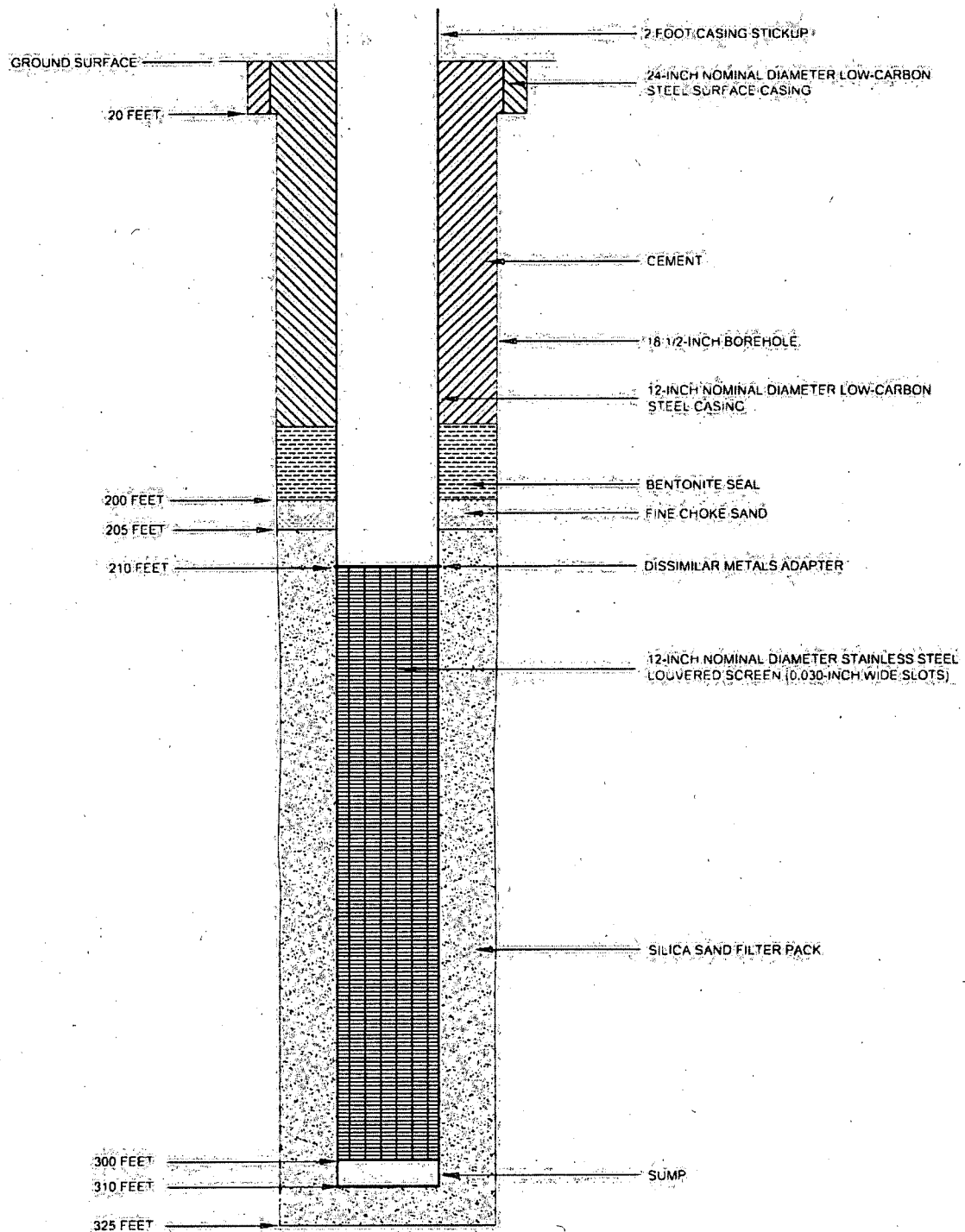
e. Will surface or conductor casing extend above grade? yes

8. Include a detailed construction diagram of the proposed well design. The diagram should verify consistency with minimum construction requirements specified in the Department's well construction rules found in Arizona Administrative Code (A.A.C.) R12-15-801 et seq. Specifically, the diagram should include borehole diameters; casing materials and diameters; perforation intervals; the expected water level; depth and thickness of the surface seal; proposed grouting materials; and the length that the surface or conductor casing will extend above grade, or vault details, if specified.

Pursuant to Arizona Revised Statutes (A.R.S.) § 45-594.B, all well construction, replacement, deepening and abandonment operations shall comply with the rules adopted pursuant to this section. Therefore, any existing well that is deepened or modified must be brought into compliance with minimum well construction standards specified above, if not already in compliance.

9. Proposed materials and method of abandonment if well is to be abandoned after project is completed (Minimum requirements per A.A.C. R12-15-816):

G:\PROJECTS\GOODYEAR\39048\_PGA\_SOUTH\SUB C-WELL INSTALLATION\CADIE-103 WELL DIAGRAM.DWG

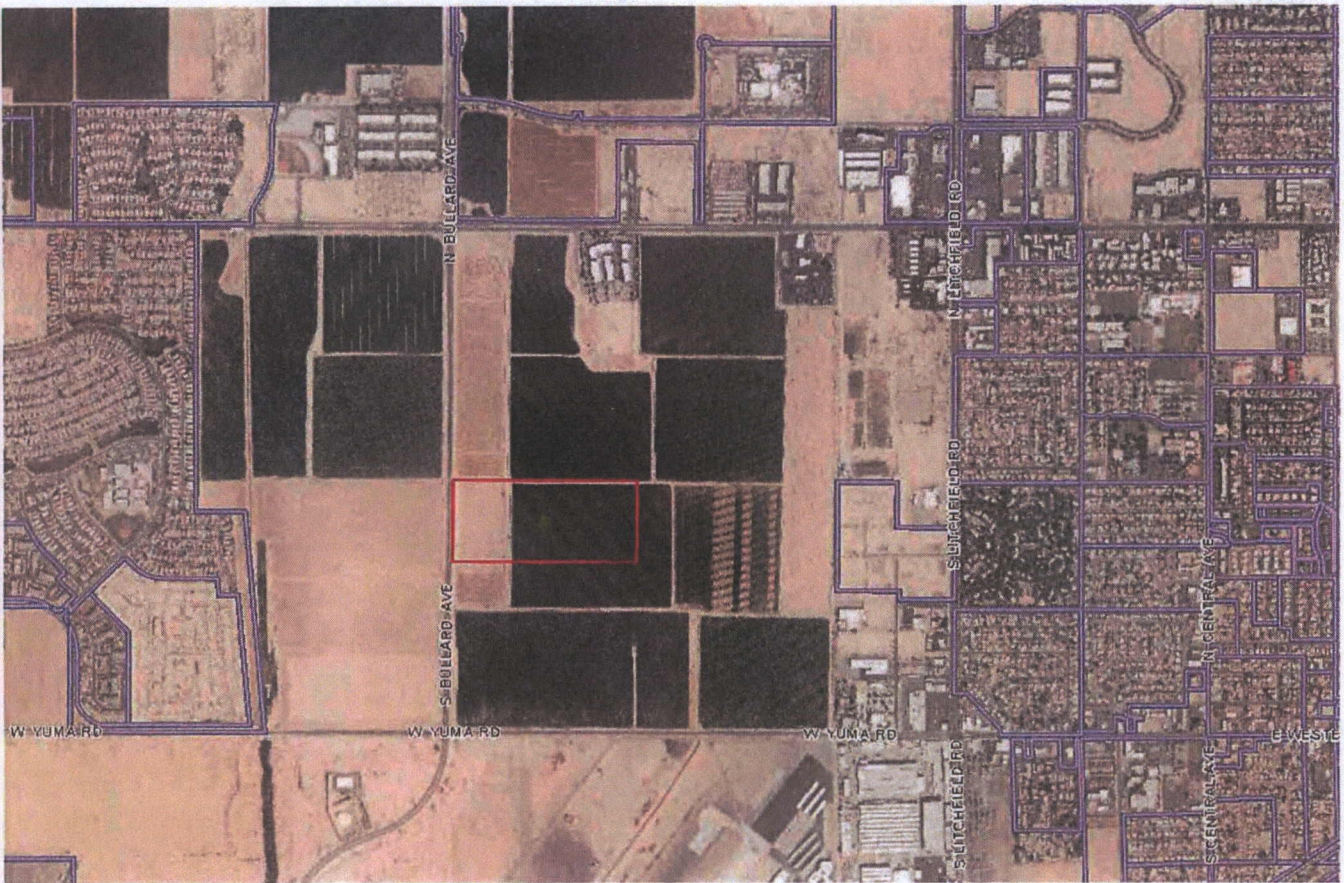


**HALEY  
ALDRICH**

PHOENIX GOODYEAR AIRPORT  
GOODYEAR, ARIZONA

**E-103 EXTRACTION WELL  
PROPOSED DESIGN**

SCALE: NOT TO SCALE  
MARCH 2014



500-04-018-W

Parcel Type: Agricultural

KOHNEN INVESTMENTS LLP

No address

**Property Information**

MCR #: N/A  
 Address: N/A  
 Latitude/Longitude:  
 Description: POR SW4 SEC 9 DAF COM SW COR SD SEC TH E 33F TH N 1790.43F TO POB TH N 847.58F TH E 1939.54F TH S 846.01F TH W 1941.36F TO POB (P/F 04-0587553) EX TH W 32F TH/OF (P/F 08-0685570)  
 Lot Size (Sq Ft): 1,615,840  
 Section, Township, Range: 91N1W  
 Market Area/Neighborhood: 09/004  
 Subdivision: Not Available  
 Lot #: Not Available  
 High School District: AGUA FRIA UNION #216  
 Elementary School District: AVONDALE SCHOOL DISTRICT  
 Local Jurisdiction: GOODYEAR  
 Owner: KOHNEN INVESTMENTS LLP  
 Mailing Address: 4250 E CLAREMONT, PARADISE VALLEY, AZ 85253 USA  
 Deed #: 040587553  
 Deed Date: May 26, 2004  
 Sale Date: None  
 Sale Price: \$0

**Valuation Data**

Tax Year:	2015	2014	2013	2012	2011
Full Cash Value:	\$30,418	\$29,676	\$29,676	\$29,676	\$29,676
Limited Property Value:	\$30,418	\$29,676	\$29,676	\$29,676	\$29,676
Legal Class:	2	2	2	2	2
Description:	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P
Assessment Ratio:	16%	16%	16%	16%	16%
Assessed FCV:	\$0	\$4748	\$4748	\$4748	\$4748
Assessed LPV:	\$4867	\$4748	\$4748	\$4748	\$4748
Property Use Code:	4110	4110	4110	4110	4110
PU Description:	AGRICULTURAL	AGRICULTURAL	AGRICULTURAL	AGRICULTURAL	AGRICULTURAL
Tax Area Code:	440803	440803	440803	440803	440803



**When Recorded Return To:**

Fennemore Craig, P.C.  
2394 East Camelback Road  
Suite 600  
Phoenix, AZ 85016-3429  
Attn: Margaret R. Gallogly

**MEMORANDUM OF WELL SITE LEASE AGREEMENT**

This Memorandum of Well Site Lease Agreement is made and entered into this February 21, 2014, by and between Kohnen Investments, L.L.P., an Arizona limited liability partnership ("Lessor") and The Goodyear Tire & Rubber Company, an Ohio corporation ("Lessee").

Lessor and Lessee have entered into that certain Well Site Lease Agreement dated February 21, 2014 ("Lease"), whereby Lessee, in exchange for certain performance, has been granted certain rights regarding the drilling, construction, installation, operation, maintenance, repair and replacement of a water production well and related equipment, improvements and appurtenances at that certain real property described in the attached Exhibit A ("Well Site").

Lessor and Lessee desire to give actual and constructive notice to all persons dealing with the Well Site that Lessee has certain rights with respect to the Well Site pursuant to the terms of the Lease. The Lease shall continue in full force and effect until the Lease is terminated as provided in the Lease.

A copy of the Lease is in the possession of both Lessor and Lessee. In the event of any conflict between this Memorandum of Lease and the Lease, the Lease shall govern and control.

[SIGNATURES APPEAR ON FOLLOWING PAGES]

IN WITNESS WHEREOF, the parties have executed this Memorandum of Lease as of the date first set forth above.

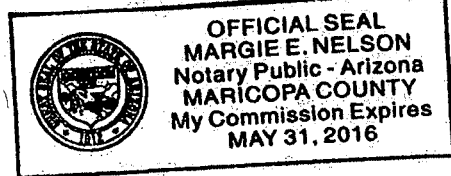
**LESSOR:**

KOHNEN INVESTMENTS, L.L.P., an  
Arizona limited liability partnership

By: THE KOHNEN FAMILY TRUST U/T/A  
dated October 1, 1979, as amended  
Its: General Partner

By: [Signature]  
Its: MANAGING PARTNER

STATE OF ARIZONA            )  
  ) ss.  
County of Maricopa        )



The foregoing instrument was acknowledged before me this 21 day of February, 2014, by Robert E. Kohnen, the Trustee of The Kohnen Family Trust U/T/A dated October 1, 1979, as amended, the General Partner of KOHNEN INVESTMENTS, L.L.P., an Arizona limited liability partnership, who executed the foregoing on behalf of the partnership.

[Signature]  
Notary Public

My Commission Expires:

5-31-2016

LESSEE:

THE GOODYEAR TIRE & RUBBER COMPANY,  
an Ohio corporation

By: Donald E. Stanley  
Its: Vice President

Attest/Witness:

[Signature]  
Its: Assistant Secretary

STATE OF OHIO                    )  
  ) ss.  
County of Summit                )

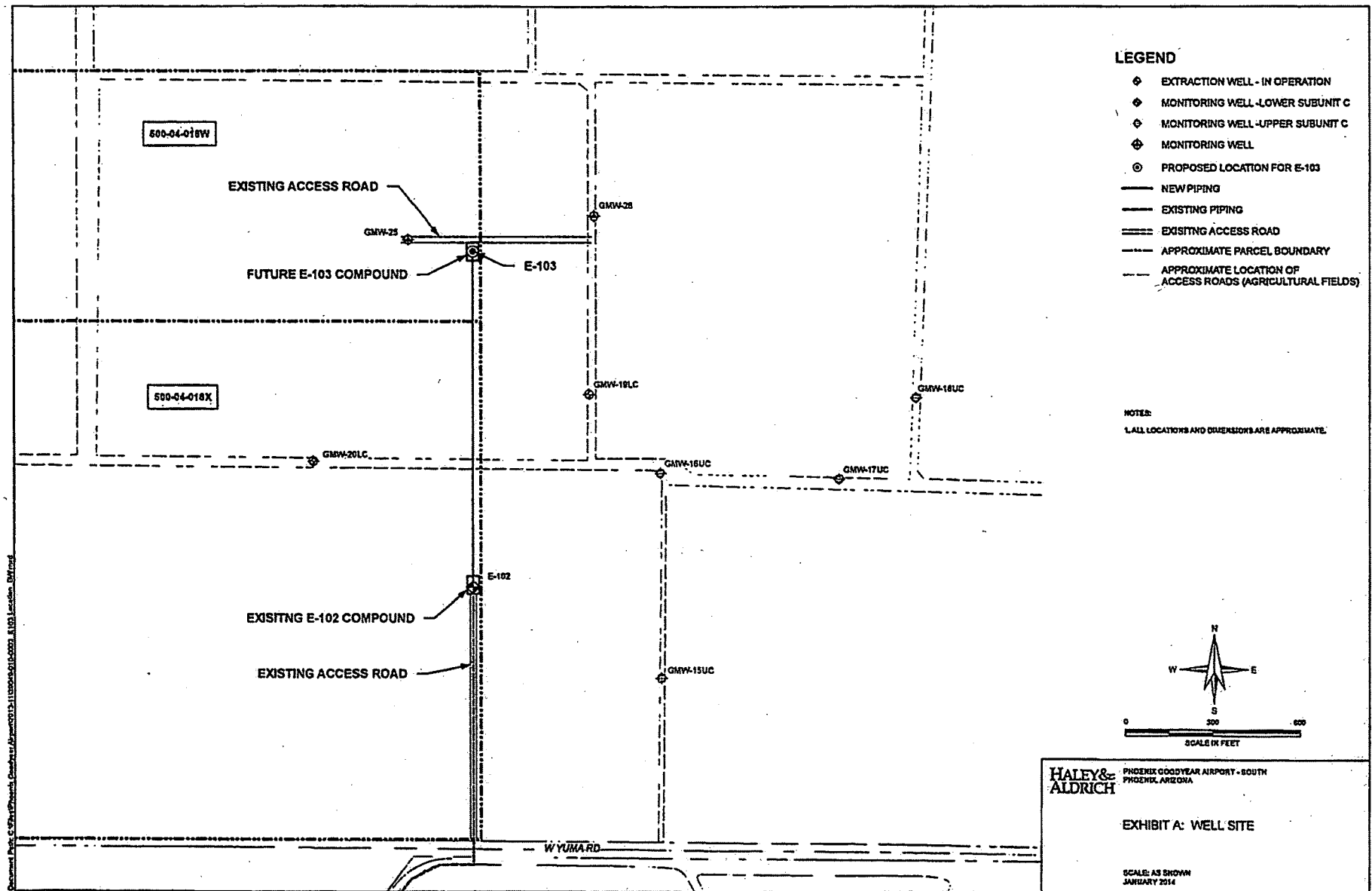
The foregoing instrument was acknowledged before me this 11<sup>th</sup> day of February, 2014, by D.E. Stanley, and Brian Bell who acknowledged themselves to be the Vice President and Assistant Secretary, respectively, of THE GOODYEAR TIRE & RUBBER COMPANY, an Ohio corporation, who executed the foregoing on behalf of the company.

[Signature]  
Notary Public

My Commission Expires:  
STEVEN C. BORDENKIRCHER, Attorney at Law  
Notary Public, State of Ohio  
~~My commission has no expiration date.~~  
Section 147.03 O.R.C.

EXHIBIT A





**When Recorded Return To:**

Fennemore Craig, P.C.  
2394 East Camelback Road  
Suite 600  
Phoenix, AZ 85016-3429  
Attn: Margaret R. Gallogly

**EASEMENT**

This Easement is made and entered as of this 28<sup>th</sup> day of February, 2014, by and between Kohnen Investments, L.L.P., an Arizona limited liability partnership ("Grantor") and The Goodyear Tire & Rubber Company, an Ohio corporation ("Grantee").

1. Grant of Easement. FOR GOOD AND VALUABLE CONSIDERATION, the receipt and sufficiency of which is acknowledged, Grantor hereby grants and conveys to Grantee a perpetual non-exclusive easement on, over, across, under and through the property described on Exhibit "1" attached (the "Easement Area") for the following purposes:

(a) the installation, construction, operation, maintenance, repair and replacement of an underground water pipeline and related equipment, improvements and appurtenances as necessary or desirable for the delivery of water from that production well (the "Well") to be installed by Grantee at that parcel of real property described in Exhibit "2" attached (the "Well Site");

(b) the installation, construction, operation, maintenance, repair and replacement of underground electric and telephone lines and related equipment, improvements and appurtenances as necessary or desirable for the provision of electric and telephone service to the Well and the Well Site (the water pipeline, electric lines and telephone lines and related equipment, improvements and appurtenances being collectively referred to as the "Utility Lines");

(c) the removal, excavation, disturbance or destruction of plants, dirt and other materials from the Easement Area, including farm crops in the ground on the date of this Easement, in connection with the installation, construction, operation, maintenance, repair and replacement of the Utility Lines or any of such Utility Lines;

(d) vehicular and pedestrian ingress and egress as necessary to take any or all of the actions described in subparagraphs 1(a) or 1(b); and

(e) vehicular and pedestrian ingress and egress to and from the Well Site.

Grantee shall determine in its sole discretion the type and size of the Utility Lines and all components thereof, subject to paragraph 3 below.

2. Termination. This Easement shall remain in full force and effect from the date hereof until the termination of that Well Site Lease Agreement dated as of the date of this Easement between Grantor, as Lessor, and Grantee, as Lessee (the "Lease"). This Easement

shall automatically terminate upon the termination of the Lease without any action by either Grantor or Grantee. Immediately following the termination of this Easement, Grantee shall record an instrument reasonably satisfactory to Grantor acknowledging the termination of this Easement.

3. Size and Use of Telephone Conduit. Pursuant to that Agreement Regarding Well dated as of the date of this Easement between Grantor and Grantee (the "Agreement Regarding Well"), Grantee shall install a single conduit for telephone wires in the Easement Area having a diameter sufficient to accommodate a minimum of fifty (50) pairs of telephone wires. Grantor and Grantee acknowledge that telephone service to the Well Site will require no more than four (4) pairs of telephone wire. Grantee consents that Grantor may use the excess capacity in the telephone conduit installed by Grantee to install telephone wires to serve the Grantor's property described on attached Exhibit "3" ("Grantor's Property"); provided, however, (i) Grantor shall use due care, and shall cause its contractors, subcontractors, agents and employees to use due care, in installing telephone wires in the conduit so as not to interfere with Grantor's use of the telephone wires in the conduit that provide telephone service to the Well Site, and (ii) in the event that telephone service to the Well Site is interrupted or disrupted and such interruption or disruption is caused by the installation, repair or maintenance of telephone wires in the conduit that provide telephone service to the Grantor's Property, or any part thereof, Grantor shall immediately restore telephone service to the Well Site, and shall reimburse Grantee upon demand for any costs and expenses incurred by Grantee in restoring telephone service to the Well Site. Grantor acknowledges that, upon installation of the conduit for telephone wire to be installed by Grantee under the Agreement Regarding Well, such telephone conduit shall not contain any telephone wires, except for the four (4) pairs necessary to provide telephone service to the Well Site. Grantee shall have no liability or obligation to install telephone wires in said conduit for the purpose of providing telephone service to the Grantor's Property.

4. Buildings, Vegetation. Grantor shall not erect or construct or permit to be erected or constructed any building or other structure on, upon, within or beneath the Easement Area. Grantor shall not interfere with Grantee's right of access to the Easement Area or to the Well Site. Grantor shall not excavate within the Easement Area without the prior written consent of Grantee, which shall not be unreasonably withheld, delayed or denied. Grantee may trim or remove any trees or shrubs that, in the judgment of the Grantee, may interfere with the Grantee's exercise of its rights under this Easement.

5. No Farming Activity. During the term of this Easement, Grantor shall not plant any crops, or permit others to plant crops, in the Easement Area, or use, or permit the use of, the Easement Area for any other farming activities. Notwithstanding the foregoing, the tenant under the farm lease that includes the Easement Area may cultivate and harvest any crops in the ground on the date of this Easement to the extent such crops have not been disturbed or destroyed by Grantee exercising its rights under this Easement.

6. Costs; Mechanic's Liens. Grantee will promptly pay all costs and expenses related to constructing, installing, operating, maintaining, repairing, or replacing the Utilities Lines or any of such Utility Lines. Grantee will not permit any mechanics', materialmen's, contractors' or other liens to be placed against the Easement Area as a result of the construction, installation, operation, maintenance, repair or replacement of the Utility Lines or any of such

Utility Lines. Grantee will cause the removal of any such lien, without any cost or expense to Grantor, and shall indemnify, protect, and hold harmless Grantor from and against any and all claims, liabilities, losses, judgments, fees, penalties, damages, actions, suits, costs and expenses suffered or incurred by Grantor, arising directly or indirectly out of Grantee's failure to promptly pay all such costs or to remove any such lien as provided in this paragraph.

7. Debris Removal; Maintenance. Upon completion of the Utility Lines in the Easement Area, Grantee shall remove or cause to be removed all equipment used and all debris and refuse resulting from the construction of the Utility Lines and shall leave the Easement Area clear of debris and in a reasonably level condition. Thereafter, Grantee shall maintain the Easement Area clear of debris and in a reasonably level condition at Grantee's sole cost and expense. Grantor shall have no obligation to improve the surface of the Easement Area in any manner whatsoever by, for example, landscaping or paving the Easement Area.

8. Compliance With Laws. Grantee shall comply with any and all laws applicable to the construction, installation, operation, maintenance, repair or replacement of the Utility Lines or any of such Utility Lines. Grantee shall obtain any and all permits and other government approvals required to undertake any of those actions. All companies retained by Grantee for the construction, installation, operation, maintenance, repair or replacement of the Utility Lines or any of such Utility Lines will hold all licenses required for such work by the State of Arizona, if any.

9. Indemnity. Grantee shall indemnify, protect and hold Grantor harmless from and against all claims, liabilities, losses, judgments, fees, penalties, damages, actions, suits, costs, expenses which Grantor may suffer or incur by reason of Grantee's breach of or default under this Easement, or by reason of the acts or omissions of Grantee or its contractors, employees, agents, invitees or licensees on or about the Easement Area.

10. Events of Default.

(a) Events of Default by Grantee. The occurrence of any of the following shall constitute an event of default by Grantee:

(i) Grantee fails to perform any of its obligations under the Agreement Regarding Well, and does not cure said failure within the applicable time period specified in the Agreement Regarding Well; or

(ii) Grantee fails to perform any of its obligations under the Lease and does not cure said failure within the applicable time period specified in the Lease; or

(iii) Grantee fails to perform any of its obligations under this Easement and does not fully cure such failure within (i) ten (10) business days after receipt of written notice to Grantee from Grantor, if such failure can be cured by the payment of money, or (ii) thirty (30) days after receipt of written notice to Grantee from Grantor, if such failure cannot be cured by the payment of money, or, if such failure cannot be reasonably cured within the thirty (30)-day period, Grantee does not, within such thirty (30)-day period, commence, and thereafter diligently proceed with, all actions necessary to cure such failure as soon as reasonably possible.



(b) Default by Grantor. Grantor shall be in default under this Easement if Grantor fails to perform any of its obligations under this Easement and does not fully cure such failure within (i) ten (10) business days after receipt of written notice to Grantor from Grantee, if such failure can be cured by the payment of money, or (ii) thirty (30) days after written notice to Grantor, if such failure cannot be cured by the payment of money, or, if such failure cannot reasonably be cured within the thirty (30)-day period, Grantor does not, within such thirty (30)-day period, commence, and thereafter diligently proceed with, all actions necessary to cure such failure as soon as reasonably possible.

(c) Remedies. If Grantor or Grantee fails to perform an obligation under this Easement and does not cure such failure within the applicable cure period, the non-defaulting party may pursue all available rights and remedies under applicable law.

11. Title. Grantor hereby covenants that it is lawfully seized and possessed of the Easement Area; that it has a good and lawful right to grant an easement over the Easement Area; and that it warrants the title and quiet possession thereto against the lawful claim of all persons claiming by or through Grantor, subject to all matters of record.

12. General.

(a) For purposes of providing notice or other communications under this Easement, the parties' addresses are:

Grantor:

Kohnen Investments, L.L.P.  
c/o Robert E. Kohnen  
4250 East Claremont  
Paradise Valley, AZ 85253

With a copy to:

Jeff Schneidman  
Plattner, Schneidman, Schneider, Jeffries & Plattner P.C.  
9141 E. Hidden Spur Trail  
Scottsdale, AZ 85255

Grantee:

The Goodyear Tire & Rubber Company  
200 Innovation Way  
Akron, OH 44316-0001  
Attn: Manager, Global Remediation

With a copy to:

The Goodyear Tire & Rubber Company

200 Innovation Way  
Akron, OH 44316-0001  
Attn: Corporate Secretary

All notices and other communications hereunder will be in writing and will be given by hand-delivery, by overnight express delivery or by United States Postal Service delivery, certified mail, return receipt requested. Notices and communications shall be deemed to be delivered and received on the date of hand-delivery, or one (1) business day after deposit with an overnight express delivery service, or five (5) business days after deposit with the United States Postal Service. A party may change its address by providing written notice of the new address to the other party as set forth herein. The term "business day" used in this Easement means any day other than a Saturday, a Sunday, a national holiday or a legal holiday in the State of Arizona.

(b) Unless otherwise provided in this Easement, all time periods shall be in calendar days, but in all instances the first day a notice or communication shall be deemed given and the last day for performance shall be the next business day if a calendar day is not a business day.

(c) This Easement shall be governed by and construed under and enforced in accordance with the laws of the State of Arizona. The parties consent to the jurisdiction of the State of Arizona and agree that the venue of any dispute shall be in Maricopa County. If either party commences an action against the other to interpret or enforce any of the terms of this Easement or because of the breach by the other party of any of the terms of this Easement, the losing party shall pay to the prevailing party reasonable attorneys' fees and court costs, whether or not the action is prosecuted to a final judgment.

(d) This Easement may be executed in counterparts, each of which shall be deemed an original, and all such counterparts shall constitute one and the same instrument.

(e) In the event of any conflict between the terms of this Easement and the Agreement Regarding Well, the terms of the Agreement Regarding Well shall control.

13. Binding Effect. This Easement runs with the land, is a burden upon the Easement Area, and is binding upon Grantor, its successors and assigns, and all persons having or acquiring any estate or interest in the Easement Area, or any part thereof, now or in the future. Without limiting the terms of this Easement, this Easement runs and inures to the benefit of Grantee, its successors, employees, agents, designees and assigns. Grantor acknowledges and agree that this Easement may be exercised, enjoyed and enforced by Grantee, its contractors, employees, agents, designees and assignees, including without limitation, the United States of America, the State of Arizona, and their authorized representatives, but only for the purposes set forth herein and none other.

IN WITNESS WHEREOF, the parties have executed this Easement effective as of the date first written above.

GRANTOR:

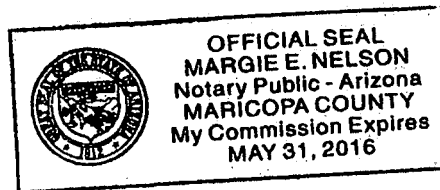
KOHNEN INVESTMENTS, L.L.P., an  
Arizona limited liability partnership

By: THE KOHNEN FAMILY TRUST U/T/A  
dated October 1, 1979, as amended.  
Its: General Partner

By:

[Signature]  
Its MANAGING

STATE OF ARIZONA )  
County of Maricopa ) ss.



The foregoing instrument was acknowledged before me this 21 day of February, 2014, by Robert E. Kohnen, the Trustee of The Kohnen Family Trust U/T/A dated October 1, 1979, as amended, the General Partner of KOHNEN INVESTMENTS, L.L.P., an Arizona limited liability partnership, who executed the foregoing in behalf of the partnership.

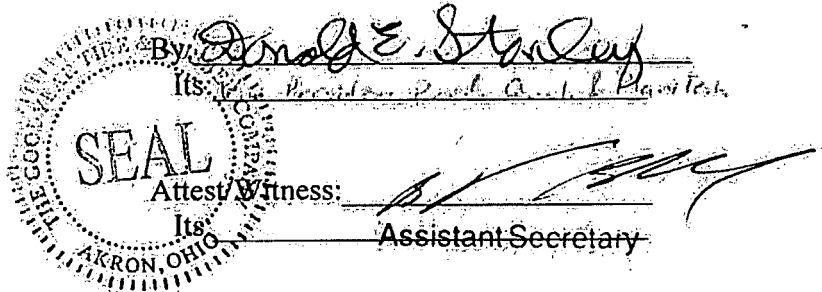
[Signature]  
Notary Public

My Commission Expires

05-31-2016

GRANTEE:

THE GOODYEAR TIRE & RUBBER  
COMPANY, an Ohio corporation



STATE OF OHIO                    )  
  ) ss.  
County of Summit                )

The foregoing instrument was acknowledged before me this 11<sup>th</sup> day of February, 2014, by D E Stanley, and B Bell who acknowledged themselves to be the Vice President and Assistant Secretary, respectively, of THE GOODYEAR TIRE & RUBBER COMPANY, an Ohio corporation, who executed the foregoing on behalf of the company.

Kim N Scanlan  
Notary Public

My Commission Expires:



KIM N. SCANLAN, Notary Public  
Residence - Medina County  
State Wide Jurisdiction, Ohio  
My Commission Expires Sept. 29, 2017

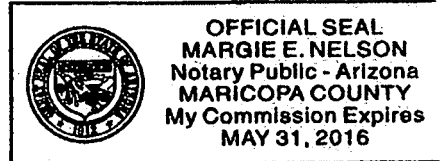


The undersigned, as the tenant under that certain Farm Lease dated 12/31/12  
Michael Brooks, hereby consents to the execution of this Easement.

BROOKS FARMS

By: M. Brooks  
Its: Partner

STATE OF ARIZONA )  
 ) ss.  
County of Maricopa )



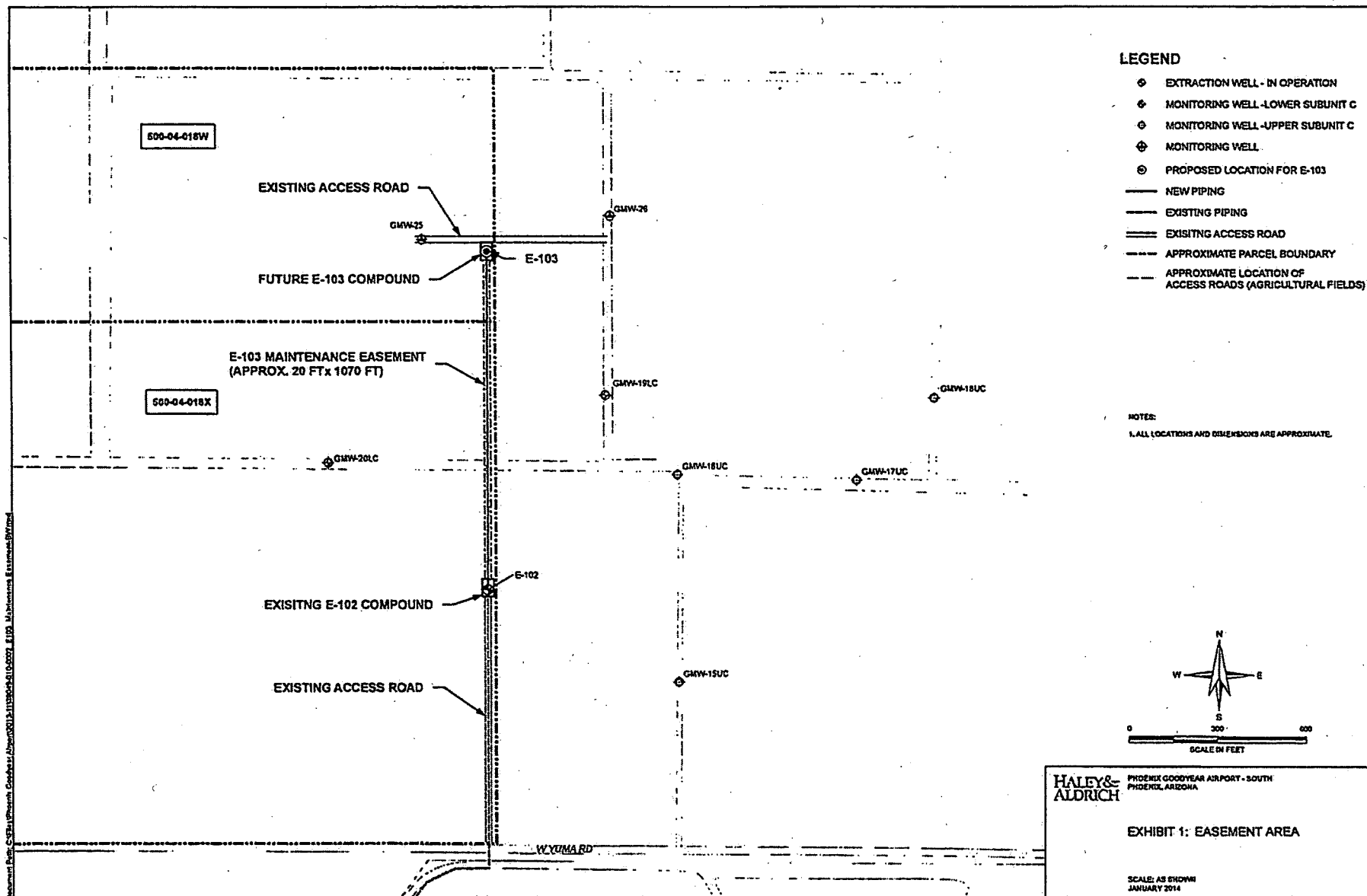
The foregoing instrument was acknowledged before me this 21 day of  
February, 2014, by Michael Brooks, the partner of Brooks  
Farms, a limited liability company on behalf of the company.

Margie E. Nelson  
Notary Public

My Commission Expires:

5-31-16

EXHIBIT 1



Arizona Department of Water Resources

3550 N Central Ave.

Phoenix AZ 85012

Customer:

LINDA DOMBROWSKI

7744 N. 17TH DR

PHOENIX, AZ 85021

Receipt #: 14-32472

Office: MAIN OFFICE

Receipt Date: 03/06/2014

Sale Type: IN\_PERSON

Cashier: WRCAP

Item No.	Index	AOBJ	Description	Ref ID	Qty	Unit Price	Ext Price
67491	15245	4439-TT	Permit to drill non-exempt well in an active management area	223087	1	180.00	180.00
RECEIPT TOTAL:							180.00

Payment type: CHECK

Amount Paid: \$180.00

Payment Received Date: 03/06/2014

Notes: FROM TTA.

Check #	388
---------	-----



**APPENDIX C**

**Well Log**

Project Phoenix-Goodyear Airport South Superfund Site, Goodyear, Arizona  
Client The Goodyear Tire & Rubber Company  
Contractor Yellow Jacket Drilling

File No. 39049-136  
Sheet No. 1 of  
Start April 11, 2014  
Finish April 25, 2014  
Driller Yellow Jacket Drilling  
H&A Rep. Kim Stemen

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type			--	Rig Make & Model: Foremost DR-24HD
Inside Diameter (in.)			--	Bit Type: Roller Bit
Hammer Weight (lb)			-	Drill Mud: None
Hammer Fall (in.)			-	Casing: Dual Rotary

Elevation  
Datum NAVD 88  
Location See Plan

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Well Diagram	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
------------	-------------------------	-------------------------	-------------------	-------------	--------------	--------------------------------	--

0							NO SAMPLE POTHOLED TO CHECK FOR UTILITIES
5							
10							
15				SW- SM, SM		10.0	WELL GRADED SAND WITH SILT; SILTY SAND DAMP
20						20.0	NO SAMPLE DRILLED OUT CASING GROUND AND ESTABLISHED CIRCULATION USING ADDED WATER
25							
30							
35							
40				SP		40.0	POORLY GRADED SAND DAMP
45				SP		45.0	POORLY GRADED SAND TO POORLY GRADED SAND WITH GRAVEL FEW CEMENTED CALICHE FRAGMENTS
50				SP- SM; SM		50.0	POORLY GRADED SAND WITH SILT; POORLY GRADED SAND WITH SILT AND GRAVEL; SILTY SAND; SILTY SAND WITH GRAVEL
55						55.0	
60				SW- SM; SM			WELL GRADED SAND WITH SILT; SILTY SAND WITH GRAVEL
65							
70				GW- GM; GM		70.0	WELL GRADED GRAVEL WITH SILT AND SAND; SILTY GRAVEL WITH SAND TRACE COBBLES IN RETURNS
75						75.0	
80				SM		80.0	SILTY SAND; SILTY SAND WITH GRAVEL
85						85.0	SILT WITH SAND; SANDY SILT
90				ML; MH			SILTY SAND; SILTY SAND WITH GRAVEL
95				SM		90.0	WELL GRADED SAND WITH GRAVEL; WELL GRADED SAND WITH SILT AND GRAVEL; SILTY SAND WITH GRAVEL
100				SW; SW- SM; SM		95.0	
105						100.0	POORLY GRADED SAND
110						105.0	SILTY SAND WITH GRAVEL FEW PIECES OF SANDY CALICHE, WEAK WATER SHOW
115				SP		114.0	POORLY GRADED SAND
120				SM		115.0	SILTY SAND MOIST
125				SP			SANDY SILT MOIST, FEW PIECES OF SANDY CALICHE
130				SM		125.0	POORLY GRADED SAND MOIST, FEW PIECES OF SANDY CALICHE
135				ML			
140				SP		135.0	SILTY SAND MOIST, LITTLE CALICHE
145				SM			
150				SP		145.0	POORLY GRADED SAND MOIST
155				MH		150.0	ELASTIC SILT
160							
165				ML		160.0	SILT MINOR WATER SHOW

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O - Open End Rod T - Thin Wall Tube U - Undisturbed Sample S - Split Spoon Sample	Riser Pipe Screen Filter Sand Cuttings Grout Concrete Bentonite Seal	Overburden (ft) Rock Cored (ft) Samples  Boring No. E-103			
			Bottom of Casing	Bottom of Hole	Water						

Field Tests: Dilatancy: R - Rapid S - Slow N - None  
Toughness: L - Low M - Medium H - High  
Plasticity: N - Nonplastic L - Low M - Medium H - High  
Dry Strength: N - None L - Low M - Medium H - High V - Very High

**HALEY  
ALDRICH**

# WELL INSTALLATION REPORT

Boring No. E-103

File No. 39049-136

Sheet No. 2 of

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Well Diagram	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
165				ML		165.0	SANDY SILT SLIGHT WATER SHOW
170				ML		170.0	SILT MOIST
175							
180				MH		180.0	ELASTIC SILT
185				SP		185.0	POORLY GRADED SAND WET, LITTLE SANDY CALICHE
190							
195							
200							
205							
210							
215							
220				SP		220.0	POORLY GRADED SAND; POORLY GRADED SAND WITH GRAVEL WET
225				SW		225.0	WELL GRADED SAND WITH GRAVEL WET
230				SP		230.0	WELL GRADED SAND WITH GRAVEL WET, HEAVING
235				SP		235.0	POORLY GRADED SAND WET
240				SP		240.0	POORLY GRADED SAND WET, FEW SANDY CALICHE FRAGMENTS, HEAVING
245							
250							
255							
260				SP		260.0	POORLY GRADED SAND WET
265							
270				SP		270.0	POORLY GRADED SAND WET, CALICHE
275				SP		275.0	POORLY GRADED SAND PIECES OF BEDDED SANDY CALICHE, HEAVING
280				SP		280.0	POORLY GRADED SAND PIECES OF BEDDED SANDY CALICHE, HEAVING
285							
290							
295							
300				SP		300.0	POORLY GRADED SAND TRACE SANDY CALICHE, VERY POOR SAMPLES BELOW 280', HEAVING SANDS, DRILLED OVERBALANCED WITH WATER.
305							
310							
315							
320				ML		320.0	SILT NO FREE WATER
325						326.0	

Boring No. E-103

## **APPENDIX D**

### **Generated Waste Documentation**

Driver's Signature

Butterfield Station Landfill

Original



40404 S. 99th Ave.  
 Mobile, AZ, 85239  
 Ph: 602-606-1008

Ticket# 708740

Customer Name ERI Environmental Response In Carrier OVERLY

Ticket Date 05/01/2014

Vehicle# 217

Volume

Payment Type Credit Account

Container

Manual Ticket#

Driver

Hauling Ticket#

Check#

Route

Billing # 0005434

State Waste Code

Gen EPA ID

Manifest 001

Destination

Grid

PO

Profile 436746AZ (DRILL CUTTINGS)

Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

RECEIVED

JUN 01 2014

	Time	Scale	Operator	Inbound	Gross	
In	05/01/2014 12:56:03	Inbound	sculwell		Tare	79320 lb
Out	05/01/2014 14:22:33	Outbound	sculwell		Net	33760 lb
					Tons	45560 lb
						22.78

Comments

Product	LD%	Qty	UDM	Rate	Tax	Amount	Origin
1 LiquidUnspec-Tons-	100	22.78	Tons				AZ
2 FUEL-Fuel Surcharg	100		%				AZ
3 EVF-P-Standard Env	100		%				AZ
4 ADE-ADEQ Fee	100	22.78	Tons				AZ

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Ticket



Please print or type.  
(Form designed for use on elite (12-pitch) typewriter.)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZD072454036	2. Page 1 of 1	3. Emergency Response Phone 100-535-5053	4. Waste Tracking Number 001
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. - 200 Innovation Way Akron, OH 44316 Generator's Phone: 330 703-0473			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1838 S. Litchfield Road Goodyear, AZ 85339		
6. Transporter 1 Company Name Ancon Service Company			U.S. EPA ID Number AZR000504639		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mojave, AZ 85239 Facility's Phone: 602-255-0630			U.S. EPA ID Number AZD983491813		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non Regulated Material, Liquid, (IDW Water)		1	TT	5,000	6AL P
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information 1) W# B73436746AZ ER Phone: Chemtrec 800-535-5053, CD Required, ERI# 20-149103-4					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Officer's Printed/Typed Name Ken R. Clark			Signature [Signature]		Month Day Year 4 17 14
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name Merley's David B. Merley			Signature [Signature]		Month Day Year 4 25 14
Transporter 2 Printed/Typed Name			Signature		Month Day Year
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator)			U.S. EPA ID Number		
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)			Month Day Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name Carla White			Signature [Signature]		Month Day Year 5 1 14

RECEIVED

JUN 08 2014

Driver's Signature



Butterfield Station Landfill

Original

40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Ticket# 708688

Customer Name ERI Environmental Response In Carrier OVERLY  
Ticket Date 05/01/2014 Vehicle# 209 Volume  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 5114  
Destination Grid  
PO  
Profile 436746AZ (DRILL CUTTINGS)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

	Time	Scale	Operator	Inbound	Gross	
In	05/01/2014 09:00:38	Inbound	sculwell		74720 lb	
Out	05/01/2014 09:52:30	Outbound	sculwell		38320 lb	
					Net	36400 lb
					Tons	18.20

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 LiquidUnspec-Tons-	100	18.20	Tons				AZ
2 FUEL-Fuel Surcharg	100		%				AZ
3 EVF-P-Standard Env	100		%				AZ
4 ADE-ADEQ Fee	100	18.20	Tons				AZ

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Tax  
Total Ticket

Driver's Signature

4037 WML Butter

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

GENERATOR	<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number		
	5. Generator's Name and Mailing Address The City of Mobile, Alabama 2000 Government Way Mobile, AL 36618			Generator's Site Address (if different than mailing address) The City of Mobile, Alabama 2000 Government Way Mobile, AL 36618				
	Generator's Phone: 334-833-0000			U.S. EPA ID Number A63000504539				
	6. Transporter 1 Company Name Aurion Service Company			U.S. EPA ID Number				
	7. Transporter 2 Company Name			U.S. EPA ID Number				
	8. Designated Facility Name and Site Address Butterfield Station Landfill 40104 B. 90th Ave Mobile, AL 36619			U.S. EPA ID Number A60983401913				
	Facility's Phone: 802-246-0630							
	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt/Vol.		
			No.	Type				
	1. Non Regulated Material, Liquid, (LOW Water)			PP				
2.								
3.								
4.								
13. Special Handling Instructions and Additional Information 1) HP# HFS406746AZ ER Phone: Chertres 800-535-5053, CD Required, ERI# 20 149103 4								
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.								
Generator's/Offeror's Printed/Typed Name			Signature		Month	Day	Year	
TRANSPORTER	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter Signature (for exports only): _____ Date leaving U.S.: _____							
	16. Transporter Acknowledgment of Receipt of Materials							
	Transporter 1 Printed/Typed Name			Signature		Month	Day	Year
Transporter 2 Printed/Typed Name			Signature		Month	Day	Year	
DESIGNATED FACILITY	17. Discrepancy							
	17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
	Manifest Reference Number: _____							
	17b. Alternate Facility (or Generator)			U.S. EPA ID Number				
	Facility's Phone: _____							
	17c. Signature of Alternate Facility (or Generator)			Signature		Month	Day	Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a								
Printed/Typed Name			Signature		Month	Day	Year	



40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Butterfield Station Landfill

Original

Ticket# 708279

Customer Name ERI Environmental Response In Carrier OVERLY  
Ticket Date 04/28/2014 Vehicle# 200 Volume  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 04282014  
Destination Grid  
PO  
Profile 436746AZ (DRILL CUTTINGS)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

	Time	Scale	Operator	Inbound	Gross	
In	04/28/2014 12:07:49	Inbound	sculwell		Tare	38600 lb
Out	04/28/2014 12:45:27	Outbound	sculwell		Net	23460 lb
					Tons	15140 lb
						7.57

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 LiquidUnspec-Tons-	100	7.57	Tons				AZ
2 FUEL-Fuel Surcharg	100		%				AZ
3 EVF-P-Standard Env	100		%				AZ
4 ADE-ADEQ Fee	100	7.57	Tons				AZ
5 WOL-Washout Fee	100	1	Each				

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Ticket

403WMFL-Butter

Please print or type.  
(Form designed for use on elite (12-pitch) typewriter.)

200-38600

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number A2D072434036	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. 200 Innovation Way Akron, OH 44315 Generator's Phone: 330 798-0578			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1658 S. Litchfield Road Goodyear, AZ 85338		
6. Transporter 1 Company Name Ancon Service Company				U.S. EPA ID Number A2R000304639	
7. Transporter 2 Company Name				U.S. EPA ID Number	
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 95239 Facility's Phone: 602-256-0530				U.S. EPA ID Number A2D983481813	
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non Regulated Material, Liquid, (IDW Water)		1	TT		P
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information 1) WPS BPS436746AZ IER Phone Chantres 800-535-5053, CD Required, ERI# 20-149103-4					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offor's Printed/Typed Name HARVEY R. CLINE		Signature [Signature]		Month 4	Day 17
15. International Shipments <input type="checkbox"/> Import to U.S. Transporter Signature (for exports only):		<input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:			
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name GARTH OVERLEY, OVERLEYS		Signature [Signature]		Month 4	Day 28
Transporter 2 Printed/Typed Name		Signature		Month	Day
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
17b. Alternate Facility (or Generator)				Manifest Reference Number: U.S. EPA ID Number	
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)				Month	Day
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name Shauna Chiswell		Signature [Signature]		Month 4	Day 28

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1-800-997-6966

DESIGNATED FACILITY'S COPY

Reorder Part# MANIFEST-C6NHWC  
913-897-6966





Butterfield Station Landfill

Original

40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Ticket# 708158

Customer Name ERI Environmental Response In Carrier OVERLY  
Ticket Date 04/25/2014 Vehicle# 217 Volume  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 0-42514  
Destination Grid  
PQ  
Profile 436746AZ (DRILL CUTTINGS)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

Time	Scale	Operator	Inbound	Gross	
In 04/25/2014 11:34:13	Inbound	sculwell		Tare	81900 lb*
Out 04/25/2014 11:34:23	Outbound	sculwell		Net	33960 lb
		* Manual Weight		Tons	47940 lb
					23.97

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 LiquidUnspec-Tons-	100	23.97	Tons				AZ
2 FUEL-Fuel Surcharg	100		%				
3 EVF-P-Standard Env	100		%				
4 ADE-ADEQ Fee	100	23.97	Tons				

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Tax  
Total Ticket

403WMFL-Butter  
Driver's Signature

81900-217

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZ00072454036	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 0-42514	
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. -- 200 Innovation Way Akron, OH 44316 Generator's Phone: 330 796-0379			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1659 S. Litchfield Road Goodyear, AZ 85339			
6. Transporter 1 Company Name Anson Service Company					U.S. EPA ID Number AZR000504639	
7. Transporter 2 Company Name					U.S. EPA ID Number	
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 85239 Facility's Phone: 602-256-0630					U.S. EPA ID Number AZD983491813	
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit WL/Vol.	
		No.	Type			
1. Non Regulated Material, Liquid, (IDW Water)		1	TT	5000	391 P	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information 1) W2# BFE436746AZ ER Phone Chemtrec 800-535-5053, CD Required, ERI# 20-149103-4						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offor's Printed/Typed Name D. R. CLARK			Signature <i>[Signature]</i>		Month 4	Day 17
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.			Port of entry/exit: Date leaving U.S.:		Year 14	
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name D. R. CLARK			Signature <i>[Signature]</i>		Month 4	Day 25
Transporter 2 Printed/Typed Name			Signature		Year 14	
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)					Month	Day
					Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name Caula Wilson			Signature <i>[Signature]</i>		Month 14	Day 25
					Year 14	

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Reorder Part# MANIFEST-C6NHWC  
913-897-6966



Total Ticket

Butterfield Station Landfill

Original

40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Ticket# 708138

Customer Name ERI Environmental Response In Carrier OVERLY  
Ticket Date 04/25/2014 Vehicle# 209  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 001  
Destination Grid  
PD  
Profile 436746AZ (DRILL CUTTINGS)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

Time	Scale	Operator	Inbound	Gross	
In 04/25/2014 10:10:39	Inbound	sculwell		Tare	79840 lb
Out 04/25/2014 11:28:49	Outbound	sculwell		Net	38200 lb
				Tons	41640 lb
					20.82

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
---------	-----	-----	-----	------	-----	--------	--------

1	LiquidUnspec-Tons-	100	20.82	Tons			AZ
2	FUEL-Fuel Surcharg	100	%				AZ
3	EVE-P-Standard Env	100	%				AZ

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

403WMFL-Butter

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

79840-209

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZ0072154035	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 001
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. - 200 Innovation Way Akron, OH 44316 Generator's Phone: 330 796-0573			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1858 S. Litchfield Road Goodyear, AZ 85338		
6. Transporter 1 Company Name Arcon Service Company			U.S. EPA ID Number AZ0000504619		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 85239 Facility's Phone: 602-256-0630			U.S. EPA ID Number AZ0983481813		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt/Vol.
		No.	Type		
1. Non Regulated Material, Liquid, (IDW Water)		1	TT	5,000	9' P
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information 1) WFO BPS436746AZ RR Phone Chemtrec 800-535-5053, CD Required, ERI# 20-149103-4					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offor's Printed/Typed Name R. P. CUDAK		Signature [Signature]		Month 4	Day 17
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name [Signature]		Signature [Signature]		Month 4	Day 25
Transporter 2 Printed/Typed Name		Signature		Month	Day
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator)			U.S. EPA ID Number		
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)			Month Day Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a					
Printed/Typed Name Cala Wilson		Signature [Signature]		Month 4	Day 25

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DESIGNATED FACILITY'S COPY

Reorder Part# MANIFEST-C6NHWC  
913-897-6966



Butterfield Station Landfill

Original

40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Ticket# 708033

Customer Name ERI Environmental Response In Carrier Spray Systems  
Ticket Date 04/24/2014 Vehicle# 305 Volume  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 42414-1/42414-2  
Destination Grid  
PO  
Profile 436745AZ (THE GOODYEAR TIRE & RUBBER CO)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

	Time	Scale	Operator	Inbound	Gross	
In	04/24/2014 11:16:31	Inbound	sculwell		Tare	70240 lb
Out	04/24/2014 13:32:53	Outbound	sculwell		Net	38480 lb
					Tons	31760 lb
						15.88

Comments

Product	LDX	Qty	UDM	Rate	Tax	Amount	Origin
1 ContSoilPet-Tons-S	100	15.88	Tons				AZ
2 FUEL-Fuel Surcharg	100		%				
3 EVF-P-Standard Env	100		%				
4 ADE-ADEQ Fee	100	15.88	Tons				

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Tax  
Total Ticket



Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

70220-305

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZ0072454036	2. Page 1 of 1	3. Emergency Response Phone 000-535-5053	4. Waste Tracking Number 42414-1
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. 260 Innovation Way Akron, OH 44316 Generator's Phone: 330 736-0573			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1558 S. Litchfield Road Goodyear, AZ 85339		
6. Transporter 1 Company Name Environmental Response Inc.			U.S. EPA ID Number AZ0000303032		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 85239 Facility's Phone: 602-256-0530			U.S. EPA ID Number AZD983481813		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non Regulated Material, Solid, (IDW Soil)		1	CM		T
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information 1) WD# BPS436746AZ, Bin # 56847 HR Phone Chemtec 800-535-5053, CD Required, HRI# 20-149103-4					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offor's Printed/Typed Name John R. Ciani		Signature [Signature]		Month 4	Day 17
15. International Shipments <input type="checkbox"/> Import to U.S. Transporter Signature (for exports only):		<input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:		Year 17	
16. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name J. LITTLE		Signature [Signature]		Month 4	Day 24
Transporter 2 Printed/Typed Name		Signature [Signature]		Year 17	
17. Discrepancy 17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number:					
17b. Alternate Facility (or Generator)			U.S. EPA ID Number		
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)			Month 4		
			Day 24		
			Year 17		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a					
Printed/Typed Name Carla Wilson		Signature [Signature]		Month 4	Day 24
				Year 17	

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Reorder Part# MANIFEST-C6NHWC  
913-897-6966

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZD072454036	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 4244-2
5. Generator's Name and Mailing Address The Goodyear Tire & Rubber Company 200 Innovation Way Akron, OH 44315 Generator's Phone: 330 796-0578			Generator's Site Address (if different than mailing address) The Goodyear Tire & Rubber Company 1658 S. Litchfield Road Goodyear, AZ 85338		
6. Transporter 1 Company Name Environmental Response Inc.				U.S. EPA ID Number AZ0000303032	
7. Transporter 2 Company Name				U.S. EPA ID Number	
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 85239 Facility's Phone: 602-256-0630				U.S. EPA ID Number AZD983481813	
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non Regulated Material, Solid, (IDW Solid)		1	CM		T
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information 1) WP# BRS436745AZ, Bin # 01982 ER Phone Chemtrec 800-535-5053, CD Required, ERI# 20-149103-4					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offeror's Printed/Typed Name Ron R. Clark		Signature [Signature]		Month 6	Day 11
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name J. L. [Signature]		Signature [Signature]		Month 4	Day 24
Transporter 2 Printed/Typed Name		Signature [Signature]		Month 1	Day 1
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator)				U.S. EPA ID Number	
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)				Month 14	Day 24
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name Carla Wilks		Signature [Signature]		Month 14	Day 24

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1-800-997-6966

DESIGNATED FACILITY'S COPY

Reorder Part# MANIFEST-C6NHWC  
913-897-6966

# RECEIPT

JUN 10 2014



Butterfield Station Landfill

Original

40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Ticket# 709119

Customer Name ERI Environmental Response In Carrier Spray Systems  
Ticket Date 05/07/2014 Vehicle# 304 Volume  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 42414-3  
Destination Grid  
PO  
Profile 436745AZ (THE GOODYEAR TIRE & RUBBER CO)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

Time	Scale	Operator	Inbound	Gross	55880 lb
In 05/07/2014 05:36:49	Inbound	cwilso30		Tare	35860 lb
Out 05/07/2014 06:10:24	Outbound	cwilso30		Net	20020 lb
				Tons	10.01

Comments

Product	LDX	Qty	UOM	Rate	Tax	Amount	Origin
1 ContSoilPet-Tons-S 100		10.01	Tons				AZ
2 FUEL-Fuel Surcharg 100			%				AZ
3 EVF-P-Standard Env 100			%				AZ
4 ADE-ADEQ Fee 100		10.01	Tons				AZ

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Tax  
Total Ticket

Please print or type  
(Form designed for use on 11x17 (12-pitch) typewriter.)

55880-304

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZD072454036	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 42414-3
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. - 200 Innovation Way Akron, OH 44316 Generator's Phone: 330 796-0578			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1658 S. Litchfield Road Goodyear, AZ 85338		
6. Transporter 1 Company Name Environmental Response Inc.			U.S. EPA ID Number AZ0000303032		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 85239 Facility's Phone: 602-256-0630			U.S. EPA ID Number AZD983481813		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non Regulated Material, Solid, (IDW Soil)		1	CM		T
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information 1) WP# BFS436745AZ, Bin # 61979 ER Phone Chemtrec 800-535-5053, CD Required, ERI# 20-149103-4					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offor's Printed/Typed Name REN R. CLARK			Signature [Signature] FOR THE GOODYEAR TIRE & RUBBER COMPANY		
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.			Port of entry/exit: Date leaving U.S.:		
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name Joe Little			Signature [Signature]		
Transporter 2 Printed/Typed Name			Signature [Signature]		
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number					
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator) Month Day Year					
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name Carla Wilson					
Signature [Signature]					
Month Day Year 15 17 14					

RECEIVED



Butterfield Station Landfill

Original

40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Ticket# 703619

Customer Name ERI Environmental Response In Carrier Spray Systems  
Ticket Date 05/13/2014 Vehicle# 304 Volume  
Payment Tyoe Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 42414-6  
Destination Grid  
PG  
Profile 436745AZ (THE GOODYEAR TIRE & RUBBER CO)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

	Time	Scale	Operator	Inbound	Gross	
In	05/13/2014 05:38:50	Inbound	cwilso30		61360 lb	
Out	05/13/2014 06:06:27	Outbound	cwilso30		36120 lb	
					Net	25240 lb
					Tons	12.62

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 SpwasteSolid0th-To	100	12.62	Tons				AZ
2 FUEL-Fuel Surcharg	100		%				AZ
3 EVF-P-Standard Env	100		%				AZ
4 ADE-ADEQ Fee	100	12.62	Tons				AZ

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Tax  
Total Ticket



Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

61360-304

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZD072454036	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 42414-6	
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. - 200 Innovation Way Akron, OH 44316 Generator's Phone: 330 796-0578			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1558 S. Litchfield Road Goodyear, AZ 85338			
6. Transporter 1 Company Name Environmental Response Inc.				U.S. EPA ID Number AZ0000303032		
7. Transporter 2 Company Name				U.S. EPA ID Number		
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 85239 Facility's Phone: 602-256-0630				U.S. EPA ID Number AZD983481813		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. Non Regulated Material, Solid, (IDW Soil)		1	CM		T	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information 1) WPT BFS436745AZ, Bin # 63304 ER Phone Chemtrec 800-535-5053, CD Required, ERI# 20-149103-4						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offor's Printed/Typed Name Ron R Clark		Signature [Signature]		Month Day Year 4/17/14		
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:				
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Joe Lutz		Signature [Signature]		Month Day Year 5/13/14		
Transporter 2 Printed/Typed Name		Signature		Month Day Year		
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
17b. Alternate Facility (or Generator)				Manifest Reference Number: U.S. EPA ID Number		
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)				Month Day Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name Carla Wilson		Signature [Signature]		Month Day Year 5/13/14		

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DESIGNATED FACILITY TO GENERATOR

Reorder Part# MANIFEST-C6NHWC  
913-897-6966

RECEIVED



Butterfield Station Landfill

Original

40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Ticket# 709759

Customer Name ERI Environmental Response In Carrier Spray Systems  
Ticket Date 05/14/2014 Vehicle# 305 Volume  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 42414-4  
Destination Grid  
PO  
Profile 436745AZ (THE GOODYEAR TIRE & RUBBER CO)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

	Time	Scale	Operator	Inbound	Gross	
In	05/14/2014 06:57:48	Inbound	sculwell		Tare	68020 lb*
Out	05/14/2014 07:35:39	Outbound	sculwell		Net	35720 lb
			* Manual Weight		Tons	32300 lb
Comments	Attendant weighed out wrong truck-manual weight					16.15

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 SowasteSolid0th-To 100		16.15	Tons				AZ
2 FUEL-Fuel Surcharg 100			%				AZ
3 EVF-P-Standard Env 100			%				AZ
4 ADE-ADED Fee 100		16.15	Tons				AZ

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Tax  
Total Ticket

Please print or type:  
(Form designed for use on elite (12-pitch) typewriter.)

305-68000

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZD072454036	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 42414-4
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. - 200 Innovation Way Akron, OH 44316 Generator's Phone: 330 796-0570			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1658 S. Litchfield Road Goodyear, AZ 85338		
6. Transporter 1 Company Name Environmental Response Inc.				U.S. EPA ID Number AZ0000303032	
7. Transporter 2 Company Name				U.S. EPA ID Number	
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 85239 Facility's Phone: 602-256-0630				U.S. EPA ID Number AZD983431313	
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non Regulated Material, Solid, (IDW Soil)		1	CM		T
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information 1) WP# BFC3436745AZ, Bin # 66181 ER Phone Chemtrec 800-535-5053, CD Required, ERI# 20-149103-4					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offeror's Printed/Typed Name RON R. CLARK			Signature <i>[Signature]</i>		Month Day Year 4 17 A
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name JOE LUTIS			Signature <i>[Signature]</i>		Month Day Year 5 14 14
Transporter 2 Printed/Typed Name			Signature		Month Day Year
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator)				U.S. EPA ID Number	
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)				Month Day Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a.					
Printed/Typed Name <i>[Signature]</i>			Signature <i>[Signature]</i>		Month Day Year 5 14 14

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DESIGNATED FACILITY TO GENERATOR

Reorder Part# MANIFEST-C6NHWC  
913-897-6966

RECEIVED

JUN 6 2014



40404 S. 99th Ave.  
Mobile, AZ, 85239  
Ph: 602-606-1008

Butterfield Station Landfill

Original

Ticket# 709937

Customer Name ERI Environmental Response In Carrier Spray Systems  
Ticket Date 05/15/2014 Vehicle# 305 Volume  
Payment Type Credit Account Container  
Manual Ticket# Driver  
Hauling Ticket# Check#  
Route Billing # 0005434  
State Waste Code Gen EPA ID  
Manifest 42414-5  
Destination Grid  
PO  
Profile 436745AZ (THE GOODYEAR TIRE & RUBBER CO)  
Generator 160-THEGOODYEARTIRE THE GOODYEAR TIRE AND RUBBER CO

	Time	Scale	Operator	Inbound	Gross	
In	05/15/2014 13:23:34	Inbound	sculwell		Tare	62920 lb
Out	05/15/2014 13:56:49	Outbound	sculwell		Net	36160 lb
					Tons	26760 lb
						13.38

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 SpwasteSolid0th-To	100	13.38	Tons				AZ
2 FUEL-Fuel Surcharg	100		%				AZ
3 EVF-P-Standard Env	100		%				AZ
4 ADE-ADEQ Fee	100	13.38	Tons				AZ

"This is to certify that the following described merchandise was weighted and counted or measured by a public or deputy weighmaster, and when properly signed and sealed, shall be prima facie evidence of the accuracy of the weight shown prescribed by law"

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive waste or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."

DRIVER: PLEASE SIGN HERE

Total Tax  
Total Ticket

*[Signature]*

Driver's Signature  
403WMFL-Butter

62900-305

Please print or type.  
(Form designed for use on elite (12-pitch) typewriter.)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number AZD072454036	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 42414-5	
5. Generator's Name and Mailing Address The Goodyear Tire and Rubber Co. 200 Innovation Way Akron, OH 44315 Generator's Phone: 330 796-0578			Generator's Site Address (if different than mailing address) The Goodyear Tire & R 1658 S. Litchfield Road Goodyear, AZ 85330			
6. Transporter 1 Company Name Environmental Response Inc.				U.S. EPA ID Number AZ0000303032		
7. Transporter 2 Company Name				U.S. EPA ID Number		
8. Designated Facility Name and Site Address Butterfield Station Landfill 40404 S. 99th Ave Mobile, AZ 85239 Facility's Phone: 602-256-0630				U.S. EPA ID Number AZD983481813		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit WL/Vol.	
		No.	Type			
1. Non-Regulated Material, Solid, (IDW Soil)		1	CM		T	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information 1) WP# BFS436745AZ, Bin # 166486 ER Phone Chemtrec 800-535-5053, CD Required, ERI# 20-149103-4						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offor's Printed/Typed Name RON R CLARK		Signature [Signature]		Month Day Year 4-17-14		
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Joe Harris		Signature [Signature]		Month Day Year 5-15-14		
Transporter 2 Printed/Typed Name		Signature		Month Day Year		
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)				U.S. EPA ID Number		
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)				Month Day Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name Carla Wilson		Signature [Signature]		Month Day Year 5-15-14		

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DESIGNATED FACILITY TO GENERATOR

Reorder Part# MANIFEST-C6NHWC  
913-897-6966



**APPENDIX E**

**Results of Hydrostatic Testing for Well E-103**



Haley & Aldrich, Inc.  
One Arizona Center  
400 E. Van Buren St., Suite 545  
Phoenix, AZ 85004  
602.760.2450

## TECHNICAL MEMORANDUM

22 July 2015  
File No.: 39049

**TO:** Project File - Phoenix Goodyear Airport South Superfund Site

**FROM:** Pejman Eshraghi, P.E., Project Engineer

**SUBJECT:** Result of the Hydrostatic Pressure Testing of the Extraction Well E-103 Pipeline

The purpose of this technical memorandum (tech memo) is to document the result of the hydrostatic pressure testing of the extraction well E-103 pipeline.

The test was conducted in accordance with the procedures set forth in the "E-103 Well and Water Line Installation Design, General Notes, Project Specific Notes Q – Hydrostatic Test Specification", dated 12 March 2014. Testing began on 24 March 2014 and ended on 25 March 2014. The testing duration was 27 hours.

Initial Pipeline Pressure: 190 pounds per square inch (psi)

Final Pipeline Pressure: 200 psi

There was no measured pressure loss during the test period.

**APPENDIX F**

**Wellhead Survey**



**MORRISON  
MAIERLE, INC.**  
*An Employee-Owned Company*

ENGINEERS  
SURVEYORS  
PLANNERS  
SCIENTISTS

1275 WEST WASHINGTON STREET, SUITE 108 • TEMPE, AZ 85281  
OFFICE: 602-273-2900 • FAX: 602-273-2901 • [www.m-m.net](http://www.m-m.net)

## GOODYEAR WELL SITES

12/08/2014

### NAD83 HORIZONTAL—NAVD88 VERTICAL (GEIOD 12A)

EO-20          RIM=958.99          PVC=958.74

N) 882381

E) 562110

LA 33°25'29.21"

LN-112°22'07.03"

E-20          RIM=958.50 B          PVC=958.55

N) 882392

E) 562117

LA 33°25'29.32"

LN-112°22'06.94"

EO-19          RIM=946.40          PVC=946.32

N) 881245

E) 561295

LA 33°25'17.94"

LN-112°22'16.59"

E-19          RIM=946.25          PVC=946.27

N) 881252

E) 561267

LA 33°25'18.01"

LN -112°22'16.91"

EO-18          RIM=942.296          PVC=941.852

N) 880181

E) 560494

LA 33°25'07.37"

LN-112°22'25.98"

E-18          RIM=942.506          PVC=942.456

N) 881167

E) 560445

LA 33°25'07.22"

LN-112°22'25.56"



E-202      RIM=N/A      PVC=N/A      FRAME OF ACCESS PANEL= 963.43

N) 885037

E) 562087

LA 33°25'55.48"

LN-112°22'07.44"

E-103      RIM=N/A      PVC=982.678

N) 888283

E) 561987

LA 33°26'27.59"

LN-112°22'08.78"

GMW-28A      RIM=963.133      PVC=962.872

N) 884930

E) 564795

LA 33°25'54.54"

LN-112°21'35.48"

GMW-27A      RIM=N/A      PVC=962.90

N) 885343

E) 564907

LA 33°25'58.63"

LN-112°21'34.18"

